





P  
Pol.Sci.

R

Royal Canadian Yacht  
Club

Year book.

1906,









# LAKE ONTARIO

## CLUB BURGEEES



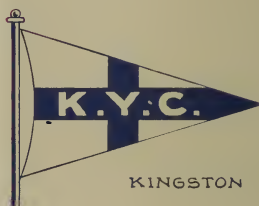
ROYAL CANADIAN



QUEEN CITY



ROYAL HAMILTON



KINGSTON



ROCHESTER



VICTORIA



OSWEGO



# ROYAL CANADIAN YACHT CLUB

## ENSIGN



## COMMODORE



## VICE COMMODORE



## REAR COMMODORE





# Royal Canadian Yacht Club

## YEAR BOOK

Published for the information  
of Members of the Club

1906



ISLAND CLUB HOUSE.



## Patrons :

HIS MAJESTY KING EDWARD VII.  
HIS ROYAL HIGHNESS THE PRINCE OF WALES.  
HIS ROYAL HIGHNESS THE DUKE OF CONNAUGHT.  
THE RIGHT HONORABLE THE EARL OF DERBY.  
HIS EXCELLENCY THE GOVERNOR-GENERAL  
OF CANADA.

---

## Officers, 1906 :

### Commodore :

ALBERT A. MACDONALD, M.D.

### Vice-Commodore :

FREDERIC NICHOLLS.

### Rear-Commodore :

J. J. KENNY.

### Hon. Treasurer :

L. S. McMURRAY.

### Executive Committee.

C. A. B. BROWN.	J. S. McMURRAY.
S. B. BRUSH.	W. H. PEARSON, JR.
STEPHEN HAAS.	F. B. POLSON.
Æ. JARVIS.	B. L. RIORDAN, M.D.
J. T. JOHNSTON.	E. L. STANTON.

### Sailing Committee :

J. W. RUTHERFORD, Chairman.	
W. E. McMURTRY.	HARRY LOGAN.
J. S. McMURRAY.	J. G. WORTS.
M. ROSS GOODERHAM.	E. K. M. WEDD.

### Secretary :

E. PORTER.

At the request of the Executive Committee I have compiled the information contained herein. Much of the reading matter is of especial interest to yachtsmen only, but the excellent reviews kindly contributed by Ex-Commodore Boswell ; Ex-Commodore Jarvis, Mr. J. Wilton Morse, and Mr. C. J. H. Snider respectively, place on record in concise and readable form the history of the Club since its inception, a review of the Canada's Cup races, and much other information concerning racing trophies and club events.

The Constitution and By-Laws of the Club, the book on Yacht Etiquette, and this Year Book, constitute the official literature of the Club, and copies may be secured by members on application to the Secretary.

FREDERIC NICHOLLS,  
Vice-Commodore.

## THE ROYAL CANADIAN YACHT CLUB.

---

BY EX-COMMODORE A. R. BOSWELL, K.C.

---

THIS CLUB was founded in 1852, the year after the great race around the Isle of Wight, when the schooner-yacht "America" won the Queen's Cup, which has been so highly prized by the whole American nation ever since, and which has caused much excitement in yachting circles during the past few years.

The club from which the Yacht Club sprang was originally called the Toronto Boat Club, but it was in those days confined to yacht sailing. During the year 1852 and for a year or two after, it was called the Toronto Yacht Club, and later on in the year 1854, by the consent of Her Gracious Majesty Queen Victoria the name was changed to that of the Royal Canadian Yacht Club.

There were quite a number of yachts belonging to the Toronto Boat Club or Yacht Club in the year 1852, the names of which are familiar to some living members, namely, the "Cherokee," "Undine," "Storm Queen," "Emerald," "Rover," "Witch," "Breeze," and others.

I find on making reference to the minute book of the Club that the first race took place under the auspices of the Toronto Boat Club in August, 1852, and the yachts entered were the "Undine," "Abercorn," "America," "Jenny Lind," "Saucy Jack," and "Cherokee."

An Act of Incorporation was passed, incorporating the Yacht Club, by the Legislature of the Province of Ontario, in the year 1868, and a further Act was also passed in the year 1885, giving certain additional powers to the Club.

The Royal Canadian Yacht Club was much encouraged in yacht racing by the gift of His Royal Highness The Prince of Wales (now His Majesty King Edward) of a very handsome champion cup, which is still styled the Prince of Wales Cup and sailed for annually, a handsome silver medal being given to the victor each year.

This cup has been competed for not only by yachts belonging to Toronto, but by those hailing from Hamilton, Cobourg, Belleville, Kingston and other places, whose owners became members of the Club and whose yachts were made Club yachts.

In 1860 when the Prince visited this country the then commodore of the Royal Canadian Yacht Club read an address to His Royal Highness, which was graciously replied to. He then agreed to become a patron of the Club, and in a tremendous rain storm started a fleet of yachts in the regatta which took place on the

7th September of that year. The yachts taking part in this regatta were the "Rivet," "Canada," "Sea Gull," "Dart," "Water Lily," "Arrow," "Marian," "Fairy," "Phantom," "Storm Queen," "Expert," "Surge," and "Glance." The "Rivet" was the winner of this race.

The first yacht to win the Prince of Wales Cup was the "Wide-awake," of Cobourg, a centre-board yacht and very fast in her class. The next in point of honor was a yacht called the "George Steers," brought from the United States by a yachtsman of Cobourg. She was designed by the man after whom she was called, and he it was who designed the great yacht, "America," which won the Queen's Cup in 1851. The "George Steers" was afterwards called the "Gorilla," and was one of the fastest yachts on Lake Ontario for several years.

Some of the Governors-General of Canada have been generous in their gifts to the Royal Canadian Yacht Club. Lord Dufferin presented some beautiful gold and bronze medals, and the Marquis of Lorne and the Princess Louise a handsome cup, Lord Lansdowne also a handsome cup, and other cups and trophies have been presented from time to time by members of the Club.

The greatest encouragement to yachtsmen of the Province of Ontario was the gift of Her Gracious Majesty Queen Victoria, who in the year 1890, presented the beautiful Queen's Cup, which was and is to be sailed for by Canadian yachts on Lake Ontario annually, the Royal Canadian Yacht Club being the custodians of the cup. This cup is highly prized and is open to all Canadian yachts belonging to clubs in Canadian towns bordering on Lake Ontario, and is sailed for in three different classes. The first yacht to win the Cup was the cutter-yacht "Vreda."

The yachts of the Royal Canadian Yacht Club have been very successful in the regattas in which they have taken part from time to time, and in the year 1896, at Toledo, the well-known yacht "Canada," won from the "Vencedor," of the Lincoln Park Yacht Club, of Chicago, the Canada Cup, which is still competed for from time to time, and the race for this cup always attracts yachtsmen from many parts and is looked upon with great interest.

In writing a short history of a Club it is interesting to the members to have a record of its habitations.

The first meeting to establish a Yacht Club in Toronto was held at the Western Hotel, which was situate on Wellington Street, and quite a large gathering of Toronto men were present. Of these only three survive who are known to the writer. They are William Armstrong, Clarkson Jones, and Thomas Shortiss, Esquires, all still hale and hearty men. Mr. Shortiss is the oldest life-member of the Club. Mr. Armstrong for many years was the Club's Honorary Secretary, and Mr. Jones was looked upon as the Club's best skipper in the days gone by, having steered many a yacht to win.

Mr. Armstrong informs the writer that the first regular Club House was a small brick house which stood about where the Union Station now stands. It was the property of the late Sir Casimir Gzowski, who generously let the Club use it as their headquarters for a nominal rent. Meetings of the Club were also in its early days



held at John Seel's saloon on King Street, and here the Club members would dine together occasionally.

For a time the home of the Club was a scow, which the City Corporation permitted to be placed on one of the City's water lots, west of the well-known Rees' Wharf. Between muskrats and gales of wind this scow, Mr. Armstrong states, was lost, and then in about the year 1860 the hull of the old steamer "Provincial" was purchased and occupied by the Club, being moored to the Esplanade near the foot of Simcoe Street. She was a large and roomy craft and for some reason or other was abandoned. The Club fitted her up and she made a comfortable and happy abiding place for the members for about ten years.

In 1869 the Club erected a large and commodious Club House a little west of Simcoe Street. A wharf was built and a Club House constructed upon the wharf. At this Club House the members were enabled to obtain meals, and many enjoyable dinners and dances have taken place there. There was also a fine billiard room, which was much enjoyed by many of its members. The Club continued to occupy this Club House for both the summer and winter months until the year 1873. By that time the railways had encroached upon the Esplanade very considerably, the number of their tracks had been increased to such an extent as to make it very inconvenient, not to say dangerous, to the members going to and from the Club House, especially at night, and in October 1873 it was decided to take rooms in the town for the winter, and the building known as Bickford's Building on York Street, then next door north of the Toronto Club, provided very pleasant rooms for that and the following winter. The members were so pleased, apparently, with their up-town Club House that in 1874 they became more ambitious and purchased a building on King Street a little west of where the Palmer House now stands on the corner of King and York Streets, and this they occupied until 1876 or 1877, when a committee of the Yacht Club was appointed to meet a committee of the Toronto Club to take into consideration the subject of amalgamation. There never was an actual amalgamation between the two Clubs, but an arrangement was made by which all the members of the Yacht Club were entitled to join the Toronto Club without entrance fee or ballot, and the Toronto Club members had the privilege of becoming members of the Yacht Club on the same terms. The Toronto Club took over the town house of the Royal Canadian Yacht Club, the Yacht Club retaining the Club House on the Esplanade.

In the year 1880 the Club agreed to sell their house on the Esplanade to the Grand Trunk Railway Company and disposed of it for the sum of \$9,500, and then arranged for the erection of a Club House on the Island, where the present Club House now stands, and had for a landing place for their steam launch, a wharf at the foot of Lorne Street, the Club having purchased the "Esperanza" at Buffalo, which served the purposes of the Club until the year the "Hiawatha," the present steam launch, was built. This latter craft has been of the greatest possible service to the Yacht Club. She was built by Bertram & Co., of Toronto, is constructed of steel, and was

launched on the 9th July, 1895. The purchase money for this launch was \$7,000.

The Island Club House was formally opened in June, 1881, on which date there was a garden party given by the Club, and was largely attended.

In the year 1889 the Toronto Yacht Club, which had been in existence for some years, made overtures to the Royal Canadian Yacht Club for amalgamation, and subsequently this was carried out. The Lorne Street landing was then abandoned, and the Club House of the old Toronto Yacht Club was then made the town Club House of the Royal Canadian Yacht Club, the "Esperanza" plying between the two Club Houses.

About the year 1894 the windmill line was extended south to a very considerable extent, and an arrangement was made between the City of Toronto and the Royal Canadian Yacht Club by which the old Toronto Yacht Club House was given up and a wharf constructed on the Esplanade, upon which was erected a very handsome Club House and this was occupied by the members until the winter of 1896, when it was totally destroyed by fire. Subsequently the Club erected the building which they have recently sold, and at the present time they have but one Club House, the beautiful new edifice at the Island, which has given the members great satisfaction. The old Club House on the Island was also destroyed by fire in the year 1904.

This, shortly, is the history of the various homes of the Royal Canadian Yacht Club. Their premises now are second to none on the continent, and the membership has increased to such an extent that with but one exception it is larger than any other known yacht club in the world.

The Island Club is most attractive. The bowling green and tennis lawns are quite perfect. Many members of the Club take great delight in "bowling on the green," and large gatherings have taken place at different times from bowling clubs all over the country. Tennis and quoits are also played to a considerable extent upon the grounds.

The Royal Canadian Yacht Club has been noted for the many delightful balls, banquets and garden parties held by them. The Yacht Club ball has always been looked upon by Torontonians as the great social event of the season for many years past, and they have had many distinguished guests to honor these functions. Their garden parties, too, have been frequent. One was given some years ago when the British Association visited this city and a large number of the Association were present.

His Majesty King Edward is a patron of the Club, as is also H.R.H. the Prince of Wales, H.R.H. Prince Arthur, Duke of Connaught, and the Governor-General for the time being, has always been one of the patrons of the Club.

Regattas take place off the Toronto Island, and for the little craft on the Bay, many times during the yachting season; and cruises to Hamilton, Rochester, Niagara, Cobourg and other places, take place constantly.

During the many years the Yacht Club has been in existence

there have been but few fatalities in the recollection of the writer, but on two very sad occasions yachts have been lost belonging to the Royal Canadian Yacht Club. The first was in 1873, when the small centre-board yacht, called the "Sphinx," was lost off Bronte, and two members of the Club, Messrs. Morgan and Groves, lost their lives. A still more serious loss took place when the yacht "Foam" foundered at the mouth of the Niagara river and on it a number of yachting men, no less than seven were drowned, there being no survivor. The graves of these poor fellows are now to be seen at the door of the English church at Niagara.

In the year 1876, Major Gifford, of Cobourg, was authorized by the Club to challenge the New York Yacht Club for the America Cup. He did so, and was unsuccessful in his attempt to win it with his schooner-yacht "Countess of Dufferin," designed and built by Cuthbert of Cobourg. She was beaten by the yacht "Madeline." Subsequently in the year 1881 a challenge was issued by the consent of the Club, at the request of the owners of the yacht "Atalanta," which was also designed and built by Cuthbert. This yacht was also beaten in her attempt to lift the Cup. Her competitor was the yacht "Mischief."

The Royal Canadian Yacht Club has had from time to time many distinguished visitors, amongst them the Prince of Wales, now King Edward. We have also had as our guests, Prince Alfred, Duke of Edinburgh, Prince Arthur, Duke of Connaught, Prince George, now Prince of Wales, and the Princess Louise, all children of Her Gracious Majesty, Queen Victoria ; and quite recently the Club was honored by His Serene Highness, Prince Louis of Battenburg, who attended a garden party in 1905.

## HISTORY OF THE "CANADA'S" CUP RACES.

BY EX-COMMODORE ÆMILIUS JARVIS.

IN THE winter of 1895-6 the Lincoln Park Yacht Club, of Chicago, sent a challenge to the Royal Canadian Yacht Club, of Toronto, for a series of races, to be sailed between a yacht belonging to the fleet of the Royal Canadian Yacht Club and the "Vencedor," a yacht being built for Mr. Charles E. Berriman, Commodore of the Lincoln Park Yacht Club. After the preliminary correspondence the Royal Canadian Yacht Club invited the Lincoln Park Yacht Club to send a committee to discuss the details of the match.

The challenge was for a specific yacht, whose length was given as 42 feet waterline. At that time the system of measurement for time allowance was what is known as the old Seawanhaka rule, viz., length multiplied by the square root of sail, divided by two, equals racing length.

On Lake Ontario there was no class of racing yachts of the waterline length of the "Vencedor," and the Royal Canadian Yacht Club wished that the challenge should be made for the 42-foot racing length class, a boat approximately 37 or 38 feet waterline; but as the construction of the "Vencedor" had already commenced, a compromise was agreed upon, which largely robbed the race of interest from its inception. The compromise was that the Royal Canadian Yacht Club would build a boat in the 42-foot racing length class, and the Chicago people undertook that the "Vencedor" should not exceed 45.5 feet racing length, and should not be less than 42 feet waterline length. This arrangement made it almost a foregone conclusion that the Canadian yacht would win in light and moderate winds, and that the American yacht would be equally certain of winning in strong breezes. This point was clearly brought out at a meeting of the representatives of the two Clubs held in the Argonaut Rowing Club, Toronto, in the early part of the winter of 1896. The meeting was held in the Argonaut Rowing Club because the Royal Canadian premises had just been destroyed by fire.

The match once having been made, a syndicate was formed of members of the Royal Canadian Yacht Club, composed of the Messrs. the late George Gooderham, James Ross, of Montreal, S. F. McKinnon, of Toronto, F. J. Phillips, of Toronto, George H. Gooderham, of Toronto, and Æmilius Jarvis, of Toronto, the latter being managing owner. These gentlemen gave an order to William Fife, Jr., to design the yacht. Owing to many delays it was well on into April before the design came to hand; but Captain James

Andrews, of Oakville, who had been given charge of the construction; had prepared all the material, and, as he had received in advance of design a drawing of the lead keel, this had already been cast. I think the first attempt at erection was made on the 28th day of April, and so well were Captain Andrews' plans laid that he was able to launch the yacht, which was appropriately named the "Canada," on the 23rd day of June, 1896. As all her rigging had been prepared beforehand, she sailed her first race, unsuccessfully, on Saturday, the 27th day of June, against the "Zelma," of Hamilton, also a Fife boat of the same class, off Toronto.

The "Vencedor" was launched only a few days earlier than the "Canada," though her construction was well under way when the challenge was made. She was built at Racine, Wisconsin, from designs by A. Poekle, who had been a draughtsman with the Herreschoffs; in fact it was freely stated by eastern yachtsmen that the "Vencedor's" design was taken from a blue print of the "Niagara," Herreschoff's famous fin keel yacht that had raced so successfully in the 20 rating class of the previous season in British waters.

One of the conditions of the match was that the race was to take place over an open lake course in neutral waters. Detroit, Cleveland, Toledo, Buffalo, and Hamilton, Ontario, all sought to have the race. Ultimately, however, Toledo made a proposal that if the race was held on Lake Erie, off that port, they would give a \$500.00 cup to the winner, and \$1,500.00 in cash; and, as it was a half-way meeting point, this generous offer was accepted, and the series of races took place off Turtle Island, Lake Erie, commencing August 25th, 1896.

## FIRST DAY.

The series was to be the best two out of three races. The first race was to be over a triangular course. It proved a failure, as they could not complete the course in the time limit. As was expected, however, the "Canada," in the light wind drifted away from her under-canvassed rival.

## FIRST RACE.

The next day the same course was sailed; both got away on fairly even terms, the "Canada" on the starboard tack, forcing "Vencedor," which was under her lee, and on the port tack about. The wind was moderate from the northeast, with a slight jump of a sea. The "Canada" began at once to draw away, and continued to do so during the whole race. The first leg, seven miles, which should have been all windward work, turned after the first half hour to a reach. On the last leg of the course the "Canada," which had stood over the westward to meet the first of a shift of wind to the southwest, benefitted greatly thereby, and romped home far ahead, winning by 23 minutes 34 seconds.

	Finish.
"Canada," . . . .	5.14.23
"Vencedor," . . . .	5.37.07

## SECOND RACE.

Next day the wind had shifted to the westward and was blowing a strong breeze, from 20 to 25 miles an hour, with occasional rain squalls. The course was five knots to leeward and return, twice around. This weather was what the "Vencedor" was wishing for. She led across the line, and during the five miles to leeward, gained all the way. On the beat back on the first round the "Canada" proved closer winded, but the "Vencedor" drove through at a higher rate of speed. As on the previous day, it did not prove a dead beat, but only a long leg and a short hitch. When approaching the weather mark the "Vencedor" was ahead, but considerably to leeward, and in her anxiety to make sure of her buoy, "overstood." The "Canada" hove round at the same time as the "Vencedor," and as she was able to make her buoy, gained considerably by the "Vencedor's" error. The next trip to leeward was a broad reach in which the "Vencedor" drew away, but she made a wide gybe at the mark, losing at least half a minute thereby; as the wind had still further shifted, it made another broad reach home, the "Vencedor" still gaining, but she was unable to work off her time allowance by 26 seconds, giving the second and final race and cup to the "Canada."

Finish in corrected time.

"Canada"	.	.	.	.	2.40.38
"Vencedor"	.	.	.	.	2.41.04

In both of these contests the "Vencedor" was sailed by Captain J. G. Barbour, her sailing master, who had been mate the previous year on the 90-footer, "Defender," of America's cup fame. The "Canada" was sailed in both races by Mr. Æmilius Jarvis, of Toronto. Judges: for the R.C.Y.C., E. H. Ambrose; for the L.P. Y.C., H. C. McLeod. Referee, Oliver E. Cromwell, of New York.

Accompanying the "Canada" and the "Vencedor" was a large fleet of both Canadian and American yachts, and, taking advantage of this gathering, a meeting was held at Put-In-Bay, Lake Erie, at which it was decided to form a Union comprising the Yachting Associations on the Great Lakes. The sequel to this meeting was a joint meeting at Buffalo of the three Associations, the Lake Yacht Racing Association of Lake Ontario, the Inter-Lake Yachting Association of Lake Erie, Detroit River and Lake St. Clair, and the Lake Michigan Yachting Association of Lake Michigan. This meeting resulted in a committee being formed to draft a constitution, by-laws and racing rules: the new organization being designated the Yacht Racing Union of the Great Lakes. The rule of measurement adopted being what is known as the *Girth Rule*, viz.:  $L + B + .75G + .5$ , square root of sail area divided by 2 = rating.

With the idea of perpetuating an international contest of the character of the race just described, the owners of the yacht "Canada" decided the cup that they had won at Toledo to the Royal Canadian Yacht Club as Trustees, under a Deed of Gift, which provided for races to be held between yachts belonging to any club affiliated with the Yacht Racing Union of the Great Lakes, and in any of the classes between 30 and 40 feet. The conditions of the



Deed of Gift provided for the selection of the final representative of a challenged or challenging club from a fleet, the idea being that each country should build a number of yachts of similar size, hold trial races and select the champions, which should meet in a final race for the cup, which the donors had now named the "Canada's Cup;" and it is really from this date that the races were for the "Canada's Cup."

In the autumn of 1898 the Chicago Yacht Club challenged the Royal Canadian Yacht Club for a race in 1899 between yachts in the 35-foot class under girth rule. After the preliminary agreements were completed both Clubs set about building a fleet from which to make a final selection. The Chicago Yacht Club asked all American yacht clubs on the Great Lakes to build for the trial contests, and the Royal Canadian did the same thing with Canadian yacht clubs. In the trial races, which were held off Chicago, the following 39-footers competed: the "Genesee," hailing from Rochester Yacht Club, a Hanley-designed and built centreboard yacht; the "Prairie," designed by W. P. Stevens, Bayonne, N.J., and built at Ogdensburg, N.Y.; the "Josephine," designed by Geo. Webster, of Hamilton, Ontario; the "Bald Eagle," designed by Mr. Geo. Warrington, of Chicago; and the "Briar," owned by Mr. Peare, and designed and built by Miller Bros., of Chicago; and the "Veva," designed by A. G. Cuthbert, of Chicago.

The Canadians built the "Minota," designed by Mr. H. C. McLeod, General Manager of the Bank of Nova Scotia, who about that time had removed from Halifax to Toronto, and the "Beaver," designed by Arthur Payne, of Southampton, England. Both of these were built by a syndicate of Royal Canadian members, composed of Messrs. George Gooderham, George H. Gooderham, Hon. George A. Cox, J. H. Plummer, Frank H. Walker, J. W. Flavelle, H. C. McLeod, and Æmilius Jarvis, who was managing owner, and the construction was again entrusted to Captain James Andrews, of Oakville.

Another syndicate of Toronto yachtsmen, headed by Mr. George P. Reid, gave an order for a design to Mr. G. Herrick Duggan, of Montreal, of Seawanhaka Cup fame, who designed a large shoal centreboard boat, which was built by Harry F. Hodson, Toronto.

In Hamilton three more were built: the "Hamilton," by a syndicate headed by J. H. Fearnside; the "Myrtle," by a syndicate headed by William Burnside, and the "Weir," by Mr. Hugh Weir. The designs of all three were from local amateurs.

The result of the trial races in Chicago was that the "Genesee" was finally chosen as the challenger, the races in Toronto settling on the "Beaver." A great deal of indecision, however, was manifested as to this selection, as the "Minota" had many admirers and was the faster in light to moderate breezes, but in breezes from 8 to 10 miles an hour and up the "Beaver" was undoubtedly the faster boat.

#### FIRST DAY.

The first race for the cup was triangular, and was sailed off Toronto Island on August 22nd, 1899. There was a strong south-

west breeze blowing, with considerable sea, and a heavy haze. The "Genesee" before the race, double reefed, but the "Beaver" was able to carry her whole mainsail and jib. Both yachts crossed the line close together, but the "Beaver" well in the windward position. Unfortunately, not thirty seconds after the gun fired, the "Beaver's" mainsail came down. On examination by the crew it was found that the throat halyard pennant had broken, and as one part of the halyard was forward of the spreader and the other portion aft of the spreader, in coming down it broke the weather spreader, so that it was found impossible to make a repair, and the "Beaver" had to return into harbour. The "Genesee" went on to complete the course, but, owing to the heavy haze, and their unfamiliarity with the surroundings, they missed the weather buoy, and after being lost in the haze for several hours returned to harbour, and the race was declared off.

#### FIRST RACE.

Next day, the 23rd of August, the "Beaver" having been repaired, the race was resailed. The wind being northwest at the time of the start, the first leg was dead down the wind. The "Beaver" had the start, and with spinnaker set gained slowly for the first mile. The wind then shifted to make a broad reach. The "Genesee" quickly shifting to balloon jib, soon romped past to windward, and rounded the first buoy 100 to 150 yards in the lead. The shift in the wind brought the next leg of the course to windward. The breeze at this time was fairly fresh, and the "Beaver" began at once to cut down her lead and passed the "Genesee" after about half an hour's sail; but the wind gradually grew lighter, and the "Genesee" again crept up closer and closer, and ultimately repassed the "Beaver" about half a mile from the weather buoy. The next leg of the course was a broad reach, in light weather and a perfectly smooth sea. On this point of sailing the "Genesee" increased her lead, and won the first race by 1 minute 22 seconds.

					Finish.
"Genesee"	.	.	.	.	3. 25
"Beaver"	.	.	.	.	3. 26. 22

#### SECOND RACE.

Next day the course was to windward and return. The wind all day was extremely light, never over five miles an hour. The first leg of the course was to windward. The "Beaver" again got the start, and succeeded in holding the "Genesee" under her lee for a considerable time, but it was not long before she drew clear to leeward, and, though she could not hold as high as the "Beaver," she outfooted her throughout the whole race, and rounded the weather mark 1 minute 19 seconds ahead. The wind having held true, the next course was dead before the wind. The "Beaver" to everyone's surprise, began to gain, and cut down the "Genesee's" lead inch by inch until she began to blanket her. Off Gibraltar Point they got into a luffing match. It was plainly the "Beaver's" intention to luff the "Genesee" off her course, so as to get between



her and the mark ; but the "Genesee's" skipper was not easily caught napping, and the result of the first luffing match was to leave them still in about the same relative positions, the "Beaver" a few lengths behind. When nearing the finishing line, the "Beaver" again made an attempt to luff the "Genesee" off, and this time it looked as if the manœuvre was going to be successful. Both had been coming down before the wind with booms to starboard. The "Beaver" gybed her boom over to port, thus putting her on the starboard tack, and headed for the lee end of the line. This, if it had not been for the resource of the "Genesee's" skipper, would have blanketed and caused the "Genesee" to gybe close to the line, the intention being that when her way was off, the "Beaver" would gybe back again, and, as she had never taken her spinnaker in (still having it set to leeward), she would have more way, and, with both spinnaker and mainsail drawing, might have won on the line. But the "Genesee's" skipper here exhibited a most resourceful manœuvre, one that has seldom been witnessed. Seeing his rival's object, and that he would be forced to gybe, he promptly had the turn buckles of the main rigging unscrewed. This allowed him to let his main boom go right forward, and at the same time hauling his spinnaker boom aft, a reversal of the ordinary conditions, successfully staved off the "Beaver's" manœuvre, and brought the "Genesee" over the line with a short lead of 39 seconds.

					Finish.
"Genesee"	.	.	.	.	5.06.57
"Beaver"	.	.	.	.	5.07.36

### THIRD RACE.

The next day's race was triangular, and again the weather was extremely light. The first leg was laid to windward. The "Beaver" got the start, but was unable long to hold it ; but the race was fairly close until within half a mile of the first buoy, when the "Genesee" ran into a freshening southwest wind, which carried her round the buoy and off on the next course with lots of headway. The new breeze, however, did not reach the "Beaver" for ten minutes or more, during which time the "Genesee" had been making short miles of it on a broad reach for the next buoy. From that on it was nothing more than a procession, the result being as follows :

					Finish.
"Genesee"	.	.	.	.	3.32.11
"Beaver"	.	.	.	.	3.42.58

This gave the "Genesee" three straight races, and the Cup.

The "Genesee," it must be remembered, was sailing under the flag of the Chicago Yacht Club, though she was owned by a company composed of Rochester Yacht Club members, with Mr. Chas. Vanvoorhis as president and managing owner. She was sailed by Mr. Charles G. Davis, from a Long Island Sound Yacht Club, and the "Beaver" by Mr. Æmilius Jarvis, of Toronto. Judges : for the Chicago Yacht Club, E. P. Warner ; for the Royal Canadian Yacht Club, E. H. Ambrose. Referee, Mr. Louis M. Clark, of Boston.

Two years elapsed, when Mr. George H. Gooderham asked the Royal Canadian Yacht Club to challenge the Chicago Yacht Club for a race in 1901 between yachts of the 35-foot class, girth rule. The challenge being accepted, the same course of procedure was again pursued by both Clubs with respect to the choice of a representative. The Chicago Yacht Club built the "Illinois," designed by Mr. B. B. Crownshields, of Boston, and built by Geo. Lawley Corporation, of South Boston, for Mr. Pynchon; the "Yankee," designed by Charles G. Davis; and the "Orion," designed and built by McGregor, of Milwaukee. For Milwaukee, Jones & Laborde designed and had built in Oshkosh, Wis., a shoal-draft centreboard of the type known as "side-walks," which type had been successfully raced in the interior Wisconsin lakes. She was named "Milwaukee." In Detroit Commodore Shaw gave an order to Hanley, of Quincy Point, to build and design an improved "Genesee." She was named "Cadillac." Another boat was built in Detroit from a design by Kidd Wyldes, and named the "Detroit."

Mr. George H. Gooderham entrusted his design to Charles Sibbick, of Ryde, Isle of Wight, and Captain Andrews, of Oakville, again built the yacht. She was named the "Invader." In Hamilton Mr. J. H. Fearnside built from a novel model furnished by a Newfoundland priest, the Rev. Father O'Brien. She had angular bilges and was hollow down the centre line of her keel, and was called the "Canadian." The "Beaver" was still to the fore, so these three furnished the Canadians their trial horses. As a result of the Chicago trial races the "Cadillac" was chosen for the American defender, and the result of the Toronto trial races was that the "Invader" was chosen for the Canadian challenger. The races took place off Chicago on August 10th, 1901, the yacht taking three out of five races to be declared the winner.

#### FIRST RACE.

The first race was triangular, with a strong northeast wind and heavy sea. The "Invader" was double reefed, the "Cadillac" single reefed. It was a well known fact that the "Invader" was an indifferent performer in strong breezes but fast in light ones; but the "Cadillac" had been proven to be a good performer in both. The first leg of the course was a broad reach. The "Invader" got the better start, but the "Cadillac" overtook her and passed her about three-quarters of the way to the first buoy. It was evident that the "Invader" was outclassed in such weather. The next course was dead before the wind, spinnaker set. The "Cadillac" still kept improving her lead. The next was a close reach to the finish, encountering a heavy head sea. At this the "Invader" made a miserable showing, being entirely outsailed. As "Cadillac" was also looked upon as a fast light-weather boat, things looked exceedingly blue for the Canadian Challenger.

					Finish.
"Cadillac"	-	.	.	.	1.46.35
"Invader"	.	.	.	.	1.55.10

## SECOND RACE.

Sunday having intervened, Monday morning broke warm and calm, but about eleven o'clock, the starting hour, a light breeze sprang up from the southeast. The course was 9 knots to windward and return. The "Invader" led across the line high on the weather end, and soon began to drive ahead. At every tack it was apparent that the distance between the yachts was widening. The wind kept growing, but backing off the lake, and the "Invader" was kept rather to the eastward of her course, and kept springing into the freshening and fairing breeze. About half way out she came about on the port tack, which she was able to carry right out to the weather mark, and rounded it with a lead of several minutes. The return was a broad reach with a freshening breeze, and with balloon jib set she added to her lead, finishing almost a mile ahead.

				Finish.
"Invader"	.	.	.	2.08
"Cadillac"	.	.	.	2.14.22

## THIRD RACE.

The conditions were almost identical with those of the previous day, with a light southeast wind. The course was to be triangular, seven knots to the side. In manœuvring for the start the "Invader" was kept to the westward of the line, and had been repeatedly measuring off her distance to the outer mark of the starting line; the "Cadillac," on the contrary, was kept to the eastward of the line. The result was that the "Invader" crossed on the extreme eastern end, exactly on the gun fire, and on the starboard tack. The "Cadillac" was endeavouring to cross at the same point at the same time, but being on the port tack, the "Invader" had the right of way. The "Cadillac's" skipper held on too long, and the result was that she was put about close under the lee bow of the "Invader." The "Invader" holding her course, struck her on the starboard weather quarter. The judges promptly steamed out and ordered the "Cadillac" to withdraw, and the "Invader" was ordered to sail over, thus giving her the second race.

## FOURTH RACE.

The following day the same conditions of wind and weather prevailed, a light to moderate southeast breeze and smooth sea. The course was to windward and return, nine knots. This time the "Cadillac" had the better of the start, and held the "Invader" under her lee while several short boards were taken, but never succeeded in actually blanketing her. Ultimately both boats started off on a long board to the south on the port tack. The "Invader" kept soaking out slightly to windward, but there was little difference in the speed through the water, that little difference being in favor of the "Cadillac." After maintaining this tack for upwards of an hour the "Cadillac" was the first to feel a slightly freshening breeze, more from the south, and seemed to draw away, but to be backed off. The "Invader" promptly swung around on the other tack, and thus

was headed up on her course during the few minutes that the "Cadillac" was being headed off, so when the "Cadillac" swung around on the starboard tack the "Invader" was 150 yards or so directly ahead of her. From this to the turning buoy the "Invader" gained rapidly, and, making a close turn, started off for the finishing line on a broad reach, at a great speed; and as both wind and sea were to her liking, she continued to gain, crossing the line three hundred yards or so ahead.

				Finish.
"Invader"	.	.	.	3.07.30
"Cadillac"	.	.	.	3.09.49

This gave she "Invader" three races, and the cup returned to Canada.

The "Cadillac" was sailed by Mr. William Hale Thompson, of the Chicago Yacht Club, and the "Invader" by Mr. Æmilius Jarvis, of the Royal Canadian Yacht Club. Judges: Royal Canadian Yacht Club, E. H. Ambrose, Esq.; Chicago Yacht Club, E. P. Warner. Referee, Oliver E. Cromwell, New York.

After the race many challenges were put in—one from the Chicago Yacht Club, one from the Columbia Yacht Club, two from Detroit, and one from Rochester.

During the next month or so there was a good deal of controversy as to what challenge would be recognized, but ultimately the Royal Canadian Yacht Club accepted the challenge of the Rochester Yacht Club. The races heretofore had been between the Chicago Yacht Clubs and the Royal Canadian Yacht Club, and, as each lake had had a race, it was thought fair to give an American Lake Ontario yacht club the preference. The challenge was for a race for the following season 1902; but during the winter changes in the system of measurement were being introduced by the Yacht Racing Union, and as these rules were not adopted until the spring of 1902, a postponement of the race was arranged until the following year.

This challenge was for the new 40-foot waterline restricted class, and during the winter of 1902-3 both clubs built a vessel; the Rochester Yacht Club entrusting the designing to William Gardner, of Gardner & Cox, of New York, and the building to Mr. Wood, of City Island, Long Island Sound; this yacht was named the "Irondequoit." She was owned by a syndicate composed of Messrs. Hiram W. Sibley, Jas. S. Watson, Thos. N. Finucan, Arthur G. Yates, Walter B. Duffy, Jno. N. Beckley, Albert O. Fenn, Chas. M. Everest. The Royal Canadian Yacht Club representative was furnished by Mr. Norman Macrae, of Toronto. He ordered the design from Arthur Payne, of Southampton, and the construction was again entrusted to Captain Andrews, of Oakville. This yacht was named the "Strathcona."

As these were the first yachts of this size built under the new rules, there were no similar vessels to compare them with, so the Rochester Yacht Club had their's tried out against yachts of a similar size on Long Island Sound, chiefly the "Effort" and the "Aspirant," 41-footers. The "Strathcona" was tried out against the old "Vreda," "Merrythought," and "Canada." The result of

these Canadian tests showed that the new boat, "Strathcona," was infinitely faster than any of the old. The tests were merely for the purpose of tuning up the challenger and the defender.

#### FIRST RACE.

The races took place off Toronto, commencing August 8th, 1903. The series was to be the best three out of five. The first race was triangular. The wind was fresh from the southwest, with a rather short, steep sea. The "Strathcona" got slightly the better of the start, being to weather and dead abeam, though she actually crossed five seconds behind. For the whole trip to windward the race was of the keenest kind, the yachts never being separated by more than a few lengths or so, but the "Strathcona" kept the lead. It was very nearly lost to her, however, as at one time the "Irondequoit" was coming up fast on her weather quarter, both being on the port tack and fetching their buoy. The "Strathcona" came about on starboard tack, though it was taking her from her course, and the "Irondequoit" had to tack under her lee. After sailing for a short distance, the "Strathcona" again came back on the port tack, "Irondequoit" following, and again she came up fast, and when almost overlapping, the "Strathcona" put her helm down, and luffed as though she were going on the starboard tack, but quickly changed her helm over, and sailed away again on the port. The "Irondequoit" being misled by this manœuvre came right about on to the starboard tack, and before she could return to port tack, lost considerable way and ground. The "Strathcona" by this manœuvre had saved herself a blanket, and rounded the first buoy ahead. To the next buoy was a broad reach. It again was apparent that the "Irondequoit" was footing the faster. The "Strathcona" kept edging her off to windward, making her sail a long outer arc of the circle; but even under these conditions the "Irondequoit" sailed around and took the lead, and led at the next buoy by several lengths.

The next course was dead down the wind. With a freshening breeze, and spinnaker set to port, the "Strathcona" followed dead in the wake of the "Irondequoit, and it soon became apparent that she was interfering with the leader's wind, and the "Irondequoit" began to luff out. This the "Strathcona" kept her busy at until both had gone considerably to the westward of their course, so that to fetch the finishing line a gybe would have to be effected. During these luffing matches both had taken in their spinnakers, and were sailing under balloon jibs, but "Strathcona" had been getting her spinnaker boom shifted to leeward, so that when she had luffed the "Irondequoit" to the point that both would have to gybe, she quickly put up her helm, shot across "Irondequoit's" stern, gybed over, and promptly set her spinnaker to starboard, thus placing herself between the finishing line and her opponent, and with the big running sail set and drawing, and only a mile to go, she crossed, a winner.

			Finish.
"Strathcona" . . .	.	.	2.07.08
"Irondequoit" . . .	.	.	2.07.30



## SECOND RACE.

Next morning the wind was light, 5 to 8 miles an hour, from the southwest, smooth sea, course to windward and return. "Strathcona" got much the better of the start, and in the light breeze seemed to be much more lively, and gained continually the whole trip to windward, and also on the run down before the wind, thus finishing a rather uneventful race many hundreds of yards ahead.

	Finish.
"Strathcona" . . .	2.48.47
"Irondequoit" . . .	2.58.52

In these two races the "Irondequoit" was sailed by her sailing master, Captain Barr; but Mr. Gardner, her designer, who was on board, was much concerned at their loss, and persuaded the owners to send for Mr. Arthur Hannan, of New York, who had sailed the "Irondequoit" in her races on Long Island Sound. He and his brother arrived next morning, and took charge of the "Irondequoit," they being put on board after the yachts had left the harbour for the starting line.

## THIRD RACE.

The third race was to be triangular. The wind was fresh to strong, in fact, at times blowing almost to a moderate gale strength. The first leg of the course was to leeward. The two yachts crossed almost side by side. The "Irondequoit" was slightly ahead, and at once began to creep slowly away, and rounded the leeward mark 100 yards or so to the good. The next trip was a beat to windward, with jib topsails stowed. The "Irondequoit" began to both outpoint and outfoot the "Strathcona," standing up much stiffer, and, as she continued to gain during the whole leg, and also the next leg (which was a broad reach), this contest was as uneventful as the one on the previous day.

	Finish.
"Irondequoit" . . .	2.15.05
"Strathcona" . . .	2.20.19

## FOURTH RACE

The following day the course was to leeward and return. It was apparent from the manœuvring at the commencement that neither skipper was anxious to cross first. The wind was fresh and puffy from north-northwest, but dropping. It was at least two minutes after gun fire that both went over, the "Irondequoit" ahead, the "Strathcona" on her weather quarter, but neither heading for their buoy. The result of this unexpected manœuvre and unexpected course about northeast instead of southeast was that a number of steam yachts and sailing yachts were found to be in the way, so that the two contestants got mixed up in the field of spectators, and were separated entirely by a large steam yacht, the "Strathcona" going to windward of her and the "Irondequoit" to leeward. It was evidently the "Strathcona's" plan to attempt the manœuvre of the first day and luff the "Irondequoit" so far off

the course that she would again be between her and the objective point. So far as this point was concerned, the manœuvre proved successful, as, after chasing the "Irondequoit" close up for at least two miles eastward towards Scarboro, the "Strathcona" suddenly put up her helm, gybed over and set her spinnaker to starboard. The wind, by this time, had grown lighter, and as they sailed off shore grew lighter still. The "Strathcona" gained steadily, and when within half a mile of the turning buoy was at least two hundred yards ahead, but here she ran into a soft spot in the wind and lay motionless, with her sails hanging idle and spilling the wind. The "Irondequoit," seeing her antagonist in this plight, sailed broad off to leeward, and was fortunate enough to carry a light draft through, and sailed completely around the "Strathcona," and rounded the buoy two minutes and fifty-two seconds in advance. Now came a beat to windward. The "Strathcona" began to pick up, and before long had run up under the lee of the "Irondequoit," but do what she would she could not sail through her lee, and twist or turn as she might she always found the "Irondequoit" planted between her and the wind, in the most masterly fashion.

In order to make the race as long as possible the "Strathcona" carried the contest away to the east, but Mr. Hannan was not to be caught, and, as the "Irondequoit" was quicker in stays, any manœuvre that was attempted was quickly met. In towards shore the breeze freshened, so that both yachts were at times driving along at a good pace, and finished close together, the "Strathcona" dead in the "Irondequoit's" wake. This gave both yachts two races, and the interest in consequence was much enhanced.

			Finish.
"Irondequoit"	.	.	3.12.13
"Strathcona"	.	.	3.13.31

#### FIFTH RACE.

The next day the wind was southwest, and fresh, moderate sea. This time the "Irondequoit" got decidedly the better start, having the "Strathcona" well under her lee, where she kept her closely pinned during the whole trip to windward; but the contest was clean and exciting. "Strathcona" tacked and retacked, sailed rap-  
 full, half a dozen times during the first half hour, but, do what she would, the "Irondequoit" was always between her and the wind, or the objective point, and rounded the weather buoy with several lengths to the good. The next was a broad reach, with large jib topsails set. The "Irondequoit" continued to improve her position. The next course was dead down the wind under conditions almost similar to those of the first day, but "Irondequoit" was this time far enough ahead not to feel any interference with her wind, and also gained throughout this leg, winning the race and the series, taking the cup back again to the United States.

			Finish.
"Irondequoit"	.	.	2.40.55
"Strathcona"	.	.	2.42.17

In the first two races Captain Barr, her sailing master, sailed the "Irondequoit," and in the subsequent races, Mr. Arthur Hannan, of New York. The "Strathcona" was sailed by Mr. Æmilius Jarvis in all five events. Judges: Mr. E. H. Ambrose, for the Royal Canadian Yacht Club; Mr. Frank T. Christie, for the Rochester Yacht Club. Referee, Mr. Oliver E. Cromwell, New York.

In the autumn of 1904 the Royal Canadian Yacht Club again challenged the American holders of the cup, but this time the 30-foot waterline restricted class was resorted to. The challenge having been duly accepted, both Clubs set about building craft from which to choose their representative. The Rochester Yacht Club built three: the "Iroquois," from the design of Charles F. Herreshoff (second) built by Lawley, Boston, for a syndicate headed by Vice-Commodore Christie, and included Messrs. C. M. Everest, W. H. Briggs, L. B. Jones, Wm. Hull, J. W. Robbins); the "Rochester," from designs by William Gardner, and built by Miller Bros. of Rochester, for a large syndicate of Rochester gentlemen; and the "Kelox II," designed and built by the Pembroke Bros. for themselves, at Rochester, New York. The Canadians also built three: the "Temeraire," designed by William Fife, built by Andrews at Oakville, for Rear-Commodore Nicholls; the "Zoraya," designed by Alfred Milne of Glasgow, for Mr. J. G. Worts; and the "Naniwa," designed and built by Wm. Johnston, Hamilton, for a syndicate headed by Mr. J. H. Fearnside, of Hamilton.

The result of the trial races at Rochester was the selection of the "Iroquois," and at Toronto, the "Temeraire."

The races commenced on Saturday, August 12th, 1905, off Charlotte, New York, the series to be the best three in five. The first race was to be triangular.

#### FIRST RACE.

The wind was extremely light and variable, and a perfectly smooth sea. The judges evidently figured on a southwest wind, under which conditions the final leg of the course would be to windward. The fight for the start gave the "Iroquois" the advantage, she crossing the line with good headway, and everything set. The Canadian boat had got slightly too far to windward and had not so much way in crossing. It was soon evident that in the light wind and reach the "Iroquois" was gaining, and the first turn saw her a hundred yards or more in the lead. The wind, being very variable, had altered its direction several times during this run, but never so that their sheets were not kept flowing. The next course was dead before it, with the breeze still lighter and fluky. For some time there was no change in the relative positions, but when about half over the course the "Temeraire" made a decided gain; but the wind was light and baffling, so that at times they were dead before it, and at other times reaching, and sometimes close hauled. In this drifting the "Temeraire" seemed to hold her own, and they rounded the second buoy fairly close. The wind still remained light and variable during the next leg of the course, but on the next it freshened somewhat from the original direction; but there was no apparent



difference in position between the two boats, the "Iroquois" still holding the lead by 100 to 150 yards. The same relative positions remained for the next leg, until near the turning mark, when the "Iroquois" ran into a north-eastern chill, which brought the "Temeraire" closer; but she still held her advantage, and rounded the next buoy 2.37 ahead, and started on the home journey with a slightly better breeze from the northeast. Both set spinnakers, and sailed in this way for about half the distance home, when the leader pulled her spinnaker, trimmed her sheets for a new southwest wind of fairly good strength that for some time had been heeling the yachts sailing in shore, and, with a nice list, headed for home on an easy reach. By one of those freaks of nature that yachtsmen so frequently see, but which others do not understand, this breeze never reached the "Temeraire," though she was not 150 yards distant, and she continued a slow and uneventful sail home with spinnaker set, but constantly collapsing, and carried the northeast breeze right to the line. The result was that she was a long way behind, and many minutes; but this in no way was an indication of the relative merits of the yachts, as up to the time of this fluke in the wind the "Temeraire" was always dangerous.

					Finish.
"Iroquois"	.	.	.	.	4.02.56
"Temeraire"	.	.	.	.	4.15.46

#### SECOND RACE.

On Monday morning a change had come over the appearance of things. There was a good fresh northeast breeze and a rising sea. The course was to windward and return, four miles, twice around. This time the "Temeraire" made the better start, and soon began to outfoot and outpoint her rival, and every tack showed an increased gain. She rounded the first buoy several minutes to the good. Down the wind she added a little to this gain, largely due to the "Iroquois" turning in a reef in her mainsail preparatory to the windward work. On the second turn to windward the "Temeraire" added little to her lead, and lost slightly on the run home before the wind.

					Finish.
"Temeraire"	.	.	.	.	2.20.47
"Iroquois"	.	.	.	.	2.25.51

#### THIRD RACE.

All Monday night the wind kept up, and on Tuesday morning half a gale was blowing from the northeast, with a considerable sea. The race was triangular. Again the "Temeraire" got slightly the better start, and at once began to gain, but not to such a marked degree as on the previous day, as the "Iroquois" started with two reefs in her mainsail and small jib, which seemed to suit her much better; still the improvement was not sufficient, and the "Temeraire" made a substantial and safe gain on the first turn to windward. The next leg was a run, with the wind abaft the beam. The "Iroquois" was hard driven, with both spinnaker and balloon jib set, but the

"Temeraire" was not pressed, with extra sail. On the third leg of the first round, a reach, the "Temeraire" was satisfied with working sails, while the "Iroquois" was again pressed with balloon jib and balloon foresail. On the next turn to windward the "Temeraire" made little or no gain, and the same may be said of the next leg, but on rounding the leeward buoy, instead of jibbing, she was put about, and when she was set going it was found that her back stay was foul of her spreader, and she had to be luffed and held in the wind until it was cleared. This cut her lead down considerably, but as she still had a safe lead, no extra sail was put on her.

				Finish.
"Temeraire"	.	.	.	1.32.32
"Iroquois"	.	.	.	1.35

#### FOURTH RACE POSTPONED.

Owing to the gale having kicked up such a sea, the next morning it was extremely difficult to get a judges' boat, but the late Senator Fulford of Brockville, Ont., volunteered his large steam yacht, the "Magedoma." Early in the morning, the weatherwise foresaw a lightening in the wind, but the sea remained very heavy. At starting time the wind was so light that neither yacht could make headway against it to get to the weather line, and had to be towed out. About eleven o'clock, the wind had fallen to a calm, so that the heavy swell was in danger of setting the yachts on to the beach, and a postponement was ordered until the following day.

#### FOURTH RACE.

The next day the wind was light and variable. The judges sent the yachts out into the lake on what at that time was a windward course, but proved to be a long leg, with a short hitch. The "Iroquois" got a slight advantage in the lead, and seemed to steadily outpoint and outsail her rival, so that at no point of the race was she in jeopardy of losing her lead, and finally crossed the line three minutes to the good.

				Finish.
"Iroquois"	.	.	.	2.35.14
"Temeraire"	.	.	.	2.38.14

#### FIFTH RACE.

The course was to be triangular, and, as the wind was north-east at starting time, the first board was in that direction. While both yachts were scoring for the start, the wind shifted to the south-east. The "Temeraire" got the better of her rival, and crossed ahead, but neither skipper seemed to notice the shift of wind, and both pinned sheets flat. The American boat, being in the Canadian's wake, was feeling her back draught, and came about and stood on the port tack to clear her wind. This was taking her almost directly in the opposite direction from her proper course. The "Temeraire,"

seeing this, eased her sheets, and headed off for the buoy, and soon opened up a comfortable lead before the "Iroquois" saw her mistake, and was put around. As they proceeded into the lake the wind got lighter, and when the "Temeraire" was approaching the buoy it went back into the old quarter, so that she drifted up to the mark, and then had to make a short stretch to weather it. Her rival, however, carried along the southeast breeze, and being far to windward, easily fetched the buoy, overhauled the "Temeraire," and gave her a good smothering, just as she was rounding. The next leg, the wind was more favorable. The "Temeraire" was close astern and kept bothering the "Iroquois'" wind, so that they both began to luff out of their course. At this work the "Temeraire" seemed to be doing the best. It was a neck-and-neck race, and at one time it looked like a repetition of the conditions of the first "Strathcona"- "Irondequoit" race, and that the "Temeraire" would luff the "Iroquois" away from her buoy; but she did not carry the luffing match quite far enough, and paid off on her course rather too soon. Unfortunately, at this time she had some trouble with her spinnaker, and broke the boom, so that the balance of the trip to leeward she was without this running sail. This let "Iroquois" establish a comfortable lead for the next leg, during which the wind was light and variable, and she added a little more to her lead; so, also, on the next two legs of the course; but for the last leg the wind was fresher, from the southeast, making a beat back to the finishing line. At this "Temeraire" showed a slight gain, but she was at no time dangerous.

	Finish.
"Iroquois" . . . .	3.02.14
"Temeraire" . . . .	3.04.29

The winning of this race gave the cup to the "Iroquois," and made the first time that it had been successfully defended, as it will have been observed that in all previous races the challenging club had been successful.

The "Iroquois" was sailed in all the races by Mr. Laurie G. Mabbett, of Rochester, and the "Temeraire" by Mr. E. K. M. Wedd, of Toronto. Judges: Rochester Yacht Club, Chas. Vanvooris; Royal Canadian Yacht Club, E. H. Ambrose. Referee, W. P. Stephens, New York.

It may be of interest to those who read this history to describe more minutely the different contestants, their rig, and general type.

The "Canada" was a vessel of 57 feet overall, 38 feet water-line, 11 feet beam, 8 feet draught, with about 2,000 feet of sail. She was quite moderate in form of hull, having an easy section, though considered somewhat hollow at that time. She was cutter-rigged.

The "Vencedor" was a fin keel, 63 feet overall, 42 feet water-line, about 12.6 beam, 9 feet draught, and had about 2,300 feet of sail. She was a typical fin, having a canoe-shaped section with a bronze plate keel, at the bottom of which was hung her lead in bulb form. She also was cutter-rigged.

The "Genesee" was a centreboard boat, with all inside ballast, of the type made famous by Hanley, of Quincy Point, Mass., with

very full ends, and flat floors. She was 44 feet 8 inches overall, 27 feet 8 inches waterline, 11 feet 8 inches beam, sail area 1,458 feet. Jib and mainsail rig; flat, short bowsprit.

The "Beaver" was a keel boat of fairly easy section, but hollower than "Canada." Length overall 42.9, load waterline 29.6, beam 9.6, draught 6 feet. Sailarea, 1,311 feet. Jib and mainsail rig.

The "Invader" was an out-and-out fin type, with a bulb keel protruding a considerable distance aft of the deadwood, upon which it was hung, balance rudder. She had an exceedingly flat section, and full ends. Her lateral plane being very much cut away made her excell in light winds, but very deficient in lateral plane when heeled. She also was rigged jib and mainsail. Length overall 48 feet, lower waterline 27 feet 6 inches, beam 9 feet, draught 6 feet, sail area 1,460 feet.

The "Cadillac" was very similar to the "Genesee," being also a Hanley boat, with all inside ballast; jib and mainsail rig.

The "Irondequoit" and "Strathcona" were of approximately the same dimensions, not varying more than a few inches in any one particular, except overall length, in which the "Irondequoit" had about 4 feet the advantage. They were 40 feet waterline, 12 feet 6 inches beam, 9 feet draught, 2,600 feet of sail, and 35 feet area of immersed midship section. Both were cutter-rigged.

The "Iroquois" and "Temeraire" were also jib and mainsail boats of similar dimensions. They had 30 feet waterline, 9 feet 6 inches beam, 1,550 feet of sail, 7 feet draught, with an area of immersed midship section of  $22\frac{1}{4}$  feet. The form of midship section, however, varied considerably. The "Iroquois" had hard bilges and hollower garboards, the area of the section being made up by thickening the keel and deadwood. The "Temeraire" had easier bilges, thicker garboard and thinner keel.

## THE FISHER CUP.

---

BY C. H. J. SNIDER.

---

There are two stories of the origin of the Fisher Cup,—not necessarily conflicting, but certainly not identical. It is, perhaps, only natural that this, the oldest of the international fresh-water yachting trophies, should have a slight halo of mystery about its beginning, but it is not exactly satisfactory to the one who wishes to write about it.

According to the present holders, the Rochester Yacht Club, the Fisher Cup was presented to the Chicago Yacht Club on the 8th of July, 1882, by A. J. Fisher, Esq., as a challenge cup, and won by the following yachts:—

1882—CORA.	1892—ONWARD.
1883—ATALANTA.	1900—GENESEE.
1884—NORAH.	

The Canadian story, which, it must be frankly stated, is quite as much tradition as a written record, goes back much further. According to this the cup was won on the Atlantic coast by the yacht *Cora* in 1874 or thereabouts. The *Cora* was a 60-foot water-line boat of the type of the old *Ina*. She was bought by Commodore J. K. Barker, of Detroit, and brought to the Lakes by him. Commodore Barker, by the way, was drowned in the seventies, while coming ashore in the *Cora's* dinghy, with a load of ballast, while the yacht was being stripped for the season.

When the *Cora* came to the Lakes she was one of the crack American yachts, and Canadians were eager for a brush with her with one of their fliers of the day, the *Annie Cuthbert* (owned by Alexander Cuthbert, sr., of Cobourg, one of the predecessors of the Canadian challengers for the America Cup), the Countess of Dufferin, and *Atalanta*. The *Annie Cuthbert* and the *Cora* sailed a series of matches at Put-In-Bay, at the head of Lake Erie, and also in Lake St. Clair, in the season of 1875, and it was then, according to Canadian tradition, that the Fisher Cup was first won by a Canadian yacht.

The *Annie Cuthbert* was bought by Chicago yachtsmen, Commodore Prindiville among them, in 1879, and the cup, which had so far belonged to the winning boat, went with her to Chicago.

The Canadian sloop *Atalanta*, which made an unsuccessful bid for the America Cup in 1881, was sent to Chicago in 1883, and won the trophy back to Canada. *Atalanta* was then owned by the Gifford Syndicate of Cobourg.

Next year the yacht *Norah*, of Belleville, owned by Mr. John Bell, G.T.R. solicitor, won the cup from *Atalanta*. *Norah* held the cup for many years. There was, apparently, room for argument as to when the cup became the actual property of the winner, and whether the winner was bound to defend it at all times. Toronto yachtsmen, eager to get the trophy, endeavored to bring about a match when the new cutter *Zelma*, owned by N. B. Dick, Esq., was added to the Royal Canadian Yacht Club fleet in 1891.

*Nora* belonged to the Bay of Quinte Yacht Club, and efforts at arranging a match were unavailing. *Zelma* was sent to the bay, and actually made a start, but as there was no contestant for her she threw up the race and came home.

One way out of the difficulty presented itself in the challenge of the Rochester Yacht Club, which, being an international one, could not very well be refused. Toronto yachtsmen rather rejoiced at the prospect of the cup leaving the Bay of Quinte, as they expected to be able to recover it for themselves. *Nora* and the Rochester yacht, *Onward*, sailed a race in September, 1892. There were practically no restrictions, in the modern sense of the word, and it was blowing a gale of wind. *Onward*, with a crew of thirty-five men, piled up to windward, stood up like a church, and carried sail so ably that the Canadian defender was badly beaten, and the cup crossed the lake.

Then *Zelma*, as expected, challenged *Onward*. They raced at Rochester, or rather Charlotte, but could not arrive at a conclusion. There were two races in light winds, which could not be concluded, and on the day for the third race it blew a gale, and neither yacht could tow out of Charlotte piers. This was in 1893.

The cup stayed undisturbed in Rochester for seven years, when *Minota*, a 35-footer, as she was then classed, was sent after it, after a long series of trial races against *Beaver*. *Minota* bore the Royal Canadian Yacht Club's challenge, and the Rochester Yacht Club depended on the Canada's cup winner, *Genesee*. In the first race, in light airs, *Minota* was beaten. In the second race, sailed in a gale, she stood a splendid chance of winning, when the parting of a main shroud turnbuckle completely crippled her, and allowed *Genesee* to complete the defence of the cup with a sail-over. Since then the cup has rested quietly again in Rochester.

The status of the cup as a trophy, is no longer disputable. On November 15th, 1895, Messrs. J. R. White, Arthur T. Hagen, and Fred. S. Todd, owners of the *Onward*, donated the trophy to the Lake Yacht Racing Association, on condition that it should be a perpetual challenge cup for yachts in the 35-foot class, and larger, belonging to Lake Ontario yacht clubs enrolled in the Lake Yacht Racing Association. It is provided in the deed of gift that the cup is not to be held by the winning yacht, but by the club to which she belongs.



## RECORD OF ROYAL CANADIAN YACHT CLUB'S RACING CUPS AND TROPHIES.

BY J. WILTON MORSE.

The Royal Canadian Yacht Club have been particularly favored in the matter of cups given to the Club for competition; indeed, it is doubtful if any club in the world, whose home is on fresh water, has as many valuable trophies for its members' yachts to race for.

The list comprises:

NAME.	DONOR.	DATE.
Prince of Wales Cup	{ H.R.H. The Prince of Wales (now King Edward VII.) . . . . .	1860
Murray Cup . . . . .	Capt. J. G. Murray . . . . .	1882
Cosgrave Cup . . . . .	John Cosgrove, Esq. . . . .	1882
McGaw Cup . . . . .	Thos. McGaw, Esq. . . . .	1883
Lansdowne Cup . . . . .	{ His Excellency The Marquis of Lans- downe . . . . .	1887
Lorne Cup . . . . .	{ His Excellency The Marquis of Lorne and H.R.H. Princess Louise . . . . .	1889
Queen's Cup . . . . .	Her Majesty Queen Victoria . . . . .	1891
Harman Cup . . . . .	S. Bruce Harman, Esq. . . . .	1897
Gooderham Cup . . . . .	Geo. H. Gooderham, Esq. . . . .	1900
Barber Cup . . . . .	Henry Barber, Esq. . . . .	1902
Beaver Cup . . . . .	Dr. A. H. Garrett, <i>et al</i> . . . . .	1903
Smith Cup . . . . .	R. A. Smith, Esq. . . . .	1905
Pellatt Shield . . . . .	Sir Henry Mill Pellatt . . . . .	1906

The Royal Canadian Yacht Club received its royal warrant in 1854, and six years afterward, on the occasion of the visit to Toronto of H.R.H. the then Prince of Wales, he was pleased to present to the Royal Canadian Yacht Club a beautiful silver cup, for annual competition, by the yachts owned by members of that Club.

The first race for this cup was sailed in 1861, and from that time to the present, with the single exception of 1881, has been raced for every year.

This cup is one that every yacht in the Club is entitled to sail for, and as a result there has nearly always been a large fleet of starters, as the "Prince of Wales Cup" is looked upon as being "the" cup, and in the hope of winning it, and the handsome medal that accompanies it, every member who owns a yacht with the faintest pretensions to speed, enters her for the race.

To read over the list of winners of this historic cup, is to recall to mind nearly all the famous yachts that have ever sailed on Lake Ontario, but outstanding is the name Oriole, eleven times a winner.

Gorilla, in the sixties and seventies, won the cup four times, and in later years, Lilma and Merrythought have each won it on three different occasions.

A complete list of winners up to date is appended.

Next in importance comes the "Queen's Cup," presented to the Royal Canadian Yacht Club by our late revered Queen Victoria, in 1891, through Lord Stanley, the then Governor-General of Canada.

Though this cup was in reality given to the Royal Canadian Yacht Club, before the gift was finally accepted the Club had decided to make the cup of more value by accepting it in the names of all the Canadian yacht clubs on the Lakes, and in order to put the arrangement on a businesslike basis, they called together representatives of the different clubs on Lake Ontario and framed rules and regulations under which all the races for this cup are sailed.

In order to give all sizes of yachts a chance to win the cup they divided the races among three classes, comprising all the yachts up to thirty feet waterline: yachts between thirty and forty feet waterline and all yachts over forty feet waterline. The first race to be sailed under the auspices of the Royal Canadian Yacht Club, off Toronto.

They decided that the first race should be sailed by the yachts of the largest class, the next year the race to be sailed by the smallest class, and the third year the forty-footers were to have their show for the cup.

They also arranged that the cup should be raced for over the course of the club whose representative won the cup in the last contest sailed by the class in which the race was for the year, by this means giving every club winning the cup an opportunity of seeing a "Queen's Cup" race held on its club course.

The races for this cup are always sailed on Dominion Day, 1st July, and on most occasions spirited contests have resulted.

Of the other cups comparatively little need be said, as they have been presented to the club by different gentlemen for one purpose or another.

The "Lansdowne Cup" and "Lorne Cup" were presented by The Marquis of Lansdowne and The Marquis of Lorne and H.R.H. Princess Louise, after their official visits to Toronto, when they had been entertained by the Royal Canadian Yacht Club.

The Murray, Cosgrave, and McGaw Cups were presented to that live organization, the Toronto Yacht Club, and became the property of the Royal Canadian Yacht Club in 1890, when the two clubs amalgamated.

As with the exception of the "Prince of Wales" and "Queen's Cup" the trophies are in the hands of the sailing committee of the Club, and are allocated each year to the classes the committee think fit; the winning of them does not really mean anything, as the same cup might be held by a twenty-footer one year and a forty-footer the next.

Under these circumstances the records of the winners of the different cups are hardly worth mentioning here, though the cups have been productive of a lot of first-class racing.

The honor roll of the "Prince of Wales Cup" and "Queen's Cup" is as follows:



## List of Races for "Prince of Wales Cup" and their Winners.

DATE.	WINNER.	OWNER.	COURSE.
1861	Wide Awake.....	C. Elliott .....	Mimico, etc., and return.
1862	Gorilla .....	R. W. Standly .....	Mimico, etc., and return.
1863	Gorilla .....	R. W. Standly .....	Port Dalhousie and return.
1864	Gorilla .....	R. W. Standly .....	Port Dalhousie and return.
1865	Arrow .....	G. H. Wyatt .....	
1866	Ripple .....	E. Blake. ....	Port Credit and return.
1867	Ripple .....	E. Blake. ....	Port Dalhousie and return.
1868	Geraldine .....	E. M. Hodder .....	Port Dalhousie and return.
1869	Mosquito .....	E. M. Copeland.....	Mimico, Scarborough, etc.
1870	Ida .....	Geo. Eadie .....	Niagara.
1871	Abortive Race.....		Niagara and return.
1872	Gorilla .....	Capt. C. Gifford .....	Niagara.
1873	Lady Stanley .....	B. R. Clarkson .....	Niagara.
1874	Oriole .....	W. C. Campbell, <i>et al.</i> .....	Niagara.
1875	Oriole .....	W. C. Campbell, <i>et al.</i> .....	Niagara.
1876	Brunette .....	G. H. Wyatt, <i>et al.</i> .....	Mimico, Lake Buoy, Victoria Park.
1877	Oriole .....	J. Leys, <i>et al.</i> .....	Lighthouse, Lake Buoy, Victoria Park.
1878	Oriole .....	J. Leys, <i>et al.</i> .....	Lighthouse, Lake Buoy, Victoria Park.
1879	Oriole .....	J. Leys, <i>et al.</i> .....	Lighthouse, Lake Buoy, Victoria Park.
1880	Madcap .....	A. R. Boswell.....	Port Credit, Victoria Park.
1881	No entries .....		
1882	Cygnets .....	T. McGaw .....	Mimico, Lake Buoy, Victoria Park.
1883	Aileen .....	W. G. Gooderham, <i>et al.</i> .....	Mimico, Lake Buoy, Victoria Park.
1884	Aileen .....	W. G. Gooderham, <i>et al.</i> .....	Mimico, Lake Buoy, Victoria Park.
1885	Aileen .....	W. G. Gooderham, <i>et al.</i> .....	Mimico, Lake Buoy, Victoria Park.
1886	Oriole .....	Geo. Gooderham.....	Exhibition, Lake Buoy, Victoria Park.
1887	Oriole .....	Geo. Gooderham.....	Exhibition, Lake Buoy, Victoria Park.
1888	Oriole .....	Geo. Gooderham.....	Exhibition, Lake Buoy, Victoria Park.
1889	Oriole .....	Geo. Gooderham.....	Exhibition, Lake Buoy, Victoria Park.
1890	Oriole .....	Geo. Gooderham.....	Exhibition, Lake Buoy, Victoria Park.
1891	Vreda .....	A. R. Boswell, <i>et al.</i> .....	Exhibition, Lake Buoy, Victoria Park.
1892	Oriole .....	Geo. Gooderham.....	Exhibition, Lake Buoy, Victoria Park.
1893	Zelma .....	N. B. Dick .....	Exhibition, Lake Buoy, Victoria Park.
1894	Zelma .....	N. B. Dick .....	Exhibition, Mimico, Lake Buoy.
1895	Vreda .....	A. R. Boswell.....	Exhibition, Mimico, Lake Buoy.
1896	Zelma .....	R. A. Lucas .....	Exhibition, Mimico, Lake Buoy.
1897	Wawa .....	S. H. Townsend .....	Triangle : 24 miles base along Island shore ; apex, due south in lake.
1893	Merrythought .....	Æ. Jarvis.....	Toronto. " " "
1899	Clorita .....	G. H. Gooderham.....	Toronto. " " "
1900	Merrythought .....	Æ. Jarvis.....	Toronto. " " "
1901	Merrythought .....	Æ. Jarvis.....	Toronto. " " "
1902	Invader .....	G. H. Gooderham.....	Toronto. " " "
1903	Strathcona.....	Norman Macrae .....	Toronto. " " "
1904	Whirl .....	H. F. Darrell .....	Toronto. " " "
1905	Loraya .....	J. G. Worts .....	Toronto. " " "

## "Queen's Cup."

DATE.	WINNER.	OWNER.	COURSE.
1891	Vreda .....	A. R. Boswell .....	Toronto.
1892	Nancy .....	F. Malloch .....	Hamilton.
1893	Zelma .....	N. B. Dick .....	Toronto.
1894	Vreda .....	A. R. Boswell .....	Toronto.
1895	Vedette .....	Reed & Gray .....	Hamilton.
1896	Zelma .....	R. A. Lucas .....	Toronto.
1897	Aggie .....	Marlatt & Armstrong.....	Toronto.
1898	Verona .....	W. J. Brigger .....	Toronto.
1899	Zelma .....	R. A. Lucas .....	Toronto.
1900	Merrythought.....	Æ. Jarvis .....	Toronto.
1901	Invader .....	G. H. Gooderham.....	Toronto.
1902	Chinook .....	F. Malloch .....	Hamilton.
1903	Merrythought .....	Æ. Jarvis .....	Toronto.
1904	Whirl .....	H. F. Darrell .....	Toronto.
1905	Canada .....	Commodore Haas.....	Toronto.

# SAILING DISTANCES ON THE ST. LAWRENCE RIVER, LAKE ONTARIO, AND WELLAND CANAL.

	Ogdensburg.	Cape Vincent.	Kingston.	Oswego.	Fair Haven.	Big Sodus.	Charlotte.	Oak Orchard.	Thirty-mile Point.	Olcott.	Niagara.	Port Dalhousie.	Presque Isle.	Port Hope.	Whitby.	Toronto.	Oakville.	Hamilton.	Port Colborne.
Montreal . . .	136	196	201	245	254	264	283	303	316	329	349	359	271	299	330	359	370	383	387
Ogdensburg . . .	60	65	109	118	128	147	167	180	193	213	223	135	16	194	223	234	247	251	
Cape Vincent . . .		24	48	58	68	87	107	120	133	153	163	75	103	134	163	174	187	191	
Kingston . . .			55	64	71	88	108	121	134	154	164	76	104	135	164	175	188	192	
Oswego . . .				14	27	57	85	99	112	135	145	68	93	123	148	158	170	173	
Fair Haven . . .					15	47	75	90	103	125	135	65	88	116	138	149	160	163	
Big Sodus . . .						33	63	77	92	112	123	60	78	105	126	136	149	151	
Charlotte . . .							35	48	62	82	92	49	57	78	98	107	119	120	
Oak Orchard . . .								15	29	50	61	49	39	48	65	75	86	89	
Thirty-mile Pt . . .									13	34	44	58	40	38	50	59	70	72	
Olcott . . .										20	32	68	46	35	40	47	59	60	
Niagara . . .											16	87	62	40	31	33	42	44	
Pt. Dalhousie . . .												98	71	46	30	25	31	28	
Presque Isle . . .													33	65	95	108	121	126	
Port Hope . . .														35	65	78	92	99	
Whitby . . .															32	46	61	74	
Toronto . . .																18	33	58	
Oakville . . .																	16	53	
Hamilton . . .																		50	
Port Colborne . . .																		0	

# COMPASS BEARINGS AND DISTANCES FROM LIGHTS ON THE SOUTH SHORE TO LIGHTS ON THE NORTH SHORE OF LAKE ONTARIO.

Stony Point to Point Peter.....	W. $\frac{5}{8}$ N.	43	Miles.
Stony Point to Gibraltar Point.....	W.	155 $\frac{1}{2}$	"
Stony Point to Burlington Bay.....	W. $\frac{1}{2}$ S.	178 $\frac{1}{2}$	"
Oswego to False Ducks .....	N. by W. $\frac{1}{2}$ W.	36	"
Oswego to Point Peter .....	N. W. $\frac{1}{8}$ N.	42	"
Oswego to Port Hope.....	N. W. by W. W.	93	"
Oswego to Gibraltar Point .....	W. $\frac{7}{8}$ N.	145	"
Oswego to Whitby .....	W. by N. $\frac{1}{8}$ N.	123 $\frac{1}{2}$	"
Charlotte to Point Peter.....	N. E. by N.	45 $\frac{1}{4}$	"
Charlotte to Presque Isle.....	N. $\frac{1}{8}$ E.	49	"
Charlotte to Port Hope.....	N. N. W. $\frac{3}{4}$ W.	56 $\frac{1}{2}$	"
Big Sodus Beacon to Point Peter .....	N. $\frac{3}{4}$ W.	40	"
Big Sodus Beacon to Port Hope .....	N. W. $\frac{3}{8}$ W.	78 $\frac{1}{2}$	"
Big Sodus Beacon to Whitby.....	N. W. by W. $\frac{5}{8}$ W.	105	"
Oak Orchard to Point Peter.....	N. E. by E. $\frac{5}{8}$ E.	61	"
Oak Orchard to Port Hope .....	N.	38 $\frac{1}{2}$	"
Oak Orchard to Whitby .....	N. W.	48	"
Oak Orchard to Gibraltar Point .....	W. N. W. $\frac{1}{4}$ W.	62 $\frac{1}{2}$	"
Thirty-mile Point to Gibraltar Point, N. W. by W. $\frac{7}{8}$ W.		48	"
Thirty-mile Point to Burlington Bay.....	W.	65 $\frac{1}{2}$	"
Thirty-mile Point to Point Peter.....	E. N. E.	73 $\frac{1}{2}$	"
Thirty-mile Point to Port Hope... ..	N. by E. $\frac{7}{8}$ E.	39 $\frac{1}{2}$	"
Thirty-mile Point to Presque Isle.....	N. E. $\frac{1}{2}$ E.	58	"
Olcott to Gibraltar Point.....	N. W. by W. $\frac{1}{8}$ W.	38	"
Olcott to Port Hope.....	N. E. by N.	46 $\frac{1}{4}$	"
Fort Niagara to Whitby .....	N. by E. $\frac{1}{4}$ E.	40	"
Fort Niagara to Port Hope.....	N. E.	61 $\frac{1}{2}$	"
Fort Niagara to Presque Isle ... ..	N. E. by E. $\frac{1}{4}$ E.	85 $\frac{1}{2}$	"
Fort Niagara to Point Peter.....	E. N. E. $\frac{3}{8}$ E.	103	"
Fort Niagara to Gibraltar Point ...	N. W. by N. $\frac{1}{4}$ N.	29	"

# TABLES FOR CONVERTING STATUTE MILES INTO NAUTICAL MILES, AND NAUTICAL MILES INTO STATUTE MILES.

(The Statute Mile=5280 Feet.      The Nautical Mile=6080 Feet.)

Statute Miles.	Nautical Miles.	Statute Miles.	Nautical Miles.	Statute Miles.	Nautical Miles.	Statute Miles.	Nautical Miles.
1.00	0.868	8.25	7.164	15.50	13.460	22.75	19.756
1.25	1.085	8.50	7.381	15.75	13.677	23.00	19.973
1.50	1.302	8.75	7.598	16.00	13.894	23.25	20.190
1.75	1.519	9.00	7.815	16.25	14.111	23.50	20.407
2.00	1.736	9.25	7.032	16.50	14.328	23.75	20.625
2.25	1.953	9.50	8.250	16.75	14.546	24.00	20.842
2.50	2.171	9.75	8.467	17.00	14.763	24.25	21.059
2.75	2.388	10.00	8.684	17.25	14.980	24.50	21.276
3.00	2.605	10.25	8.901	17.50	15.197	24.75	21.493
3.25	2.822	10.50	9.118	17.75	15.414	25.00	21.710
3.50	3.039	10.75	9.335	18.00	15.631	25.25	21.927
3.75	3.256	11.00	9.552	18.25	15.848	25.50	22.144
4.00	3.473	11.25	9.769	18.50	16.065	25.75	22.361
4.25	3.690	11.50	9.986	18.75	16.282	26.00	22.578
4.50	3.907	11.75	10.203	19.00	16.500	26.25	22.796
4.75	4.125	12.00	10.421	19.25	16.717	26.50	23.013
5.00	4.342	12.25	10.638	19.50	16.934	26.75	23.230
5.25	4.559	12.50	10.855	19.75	17.151	27.00	23.447
5.50	4.776	12.75	11.072	20.00	17.368	27.25	23.664
5.75	4.993	13.00	11.289	20.25	17.585	27.50	23.881
6.00	5.210	13.25	11.506	20.50	17.802	27.75	24.098
6.25	5.427	13.50	11.723	20.75	18.019	28.00	24.315
6.50	5.644	13.75	11.940	21.00	18.236	28.25	24.532
6.75	5.861	14.00	12.157	21.25	18.453	28.50	24.750
7.00	6.078	14.25	12.375	21.50	18.671	28.75	24.967
7.25	6.296	14.50	12.592	21.75	18.888	29.00	25.184
7.50	6.513	14.75	12.809	22.00	19.105		
7.75	6.730	15.00	13.026	22.25	19.322		
8.00	6.947	15.25	13.243	22.50	19.539		

Nautical Miles.	Statute Miles.	Nautical Miles.	Statute Miles.	Nautical Miles.	Statute Miles.	Nautical Miles.	Statute Miles.
1.00	1.151	7.25	8.348	13.50	15.545	19.75	22.742
1.25	1.439	7.50	8.636	13.75	15.833	20.00	23.030
1.50	1.729	7.75	8.924	14.00	16.121	20.25	23.318
1.75	2.015	8.00	9.212	14.25	16.409	20.50	23.606
2.00	2.303	8.25	9.500	14.50	16.696	20.75	23.893
2.25	2.590	8.50	9.787	14.75	16.984	21.00	24.181
2.50	2.878	8.75	10.075	15.00	17.272	21.25	24.469
2.75	3.166	9.00	10.363	15.25	17.560	21.50	24.757
3.00	3.454	9.25	10.651	15.50	17.848	21.75	25.045
3.25	3.742	9.50	10.939	15.75	18.136	22.00	25.333
3.50	4.030	9.75	11.227	16.00	18.424	22.25	25.621
3.75	4.318	10.00	11.515	16.25	18.712	22.50	25.909
4.00	4.606	10.25	11.803	16.50	18.999	22.75	26.196
4.25	4.893	10.50	12.090	16.75	19.287	23.00	26.484
4.50	5.181	10.75	12.378	17.00	19.575	23.25	26.772
4.75	5.469	11.00	12.666	17.25	19.863	23.50	27.060
5.00	5.757	11.25	12.954	17.50	20.151	23.75	27.348
5.25	6.045	11.50	13.242	17.75	20.439	24.00	27.636
5.50	6.333	11.75	13.530	18.00	20.727	24.25	27.924
5.75	6.621	12.00	13.818	18.25	21.015	24.50	28.212
6.00	6.909	12.25	14.106	18.50	21.303	24.75	28.499
6.25	7.196	12.50	14.393	18.75	21.590	25.00	28.787
6.50	7.484	12.75	14.681	19.00	21.878		
6.75	7.772	13.00	14.969	19.25	22.166		
7.00	8.060	13.25	15.257	19.50	22.454		

## RULES OF THE ROAD AT SEA.

Aid to Memory, in Four Verses, by Thomas Gray.

### 1. Two steam-ships meeting.—

When both side-lights you see ahead,  
Port your helm, and show your **RED**.

### 2. Two steam-ships passing.—

**GREEN** to **GREEN**, or **RED** to **RED**—  
Perfect safety—Go ahead !

### 3. Two steam-ships crossing.—

**Note.**—This is the position of greatest danger ; there is nothing for it but good lookout, caution, and judgment, with prompt action.

If to your starboard **RED** appear  
It is your duty to keep clear ;  
To act as judgment says is proper :—  
To Port—or Starboard—Back—or Stop her !

But, when upon your port is seen  
A steamer's starboard light of **GREEN**,  
There's not so much for you to do,  
For **GREEN** to port keeps clear of you.

### 4. All ships must keep a good lookout, and steam-ships must stop and go astern if necessary.—

Both in danger and in doubt  
Always keep a good lookout ;  
In danger, with no room to turn,  
Ease her !—Stop her !—Go astern !

---

## DIRECTIONS FOR PASSING BUOYS.

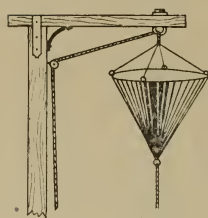
1. In approaching the channel, etc., from seaward, **RED BUOYS**, with **EVEN NUMBERS**, will be found on the **STARBOARD** side of the channel, and must be left on the **STARBOARD** hand in passing in.

2. In approaching the channel, etc., from seaward, **BLACK BUOYS**, with **ODD NUMBERS**, will be found on the **PORT** side of the channel, and must be left on the **PORT** hand in passing in.

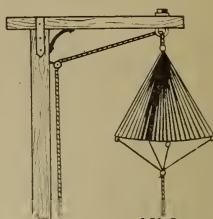
3. **BUOYS** painted with **RED** and **BLACK HORIZONTAL STRIPES** will be found on **OBSTRUCTIONS**, with channel-ways on either side of them, and may be left on either hand in passing in.

4. **BUOYS** painted with **WHITE** and **BLACK PERPENDICULAR STRIPES** will be found in **MID-CHANNEL**, and must be passed close-to to avoid danger.

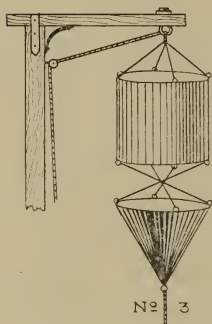
# STORM SIGNAL CODE AS EMPLOYED AT CANADIAN LAKE STATIONS.



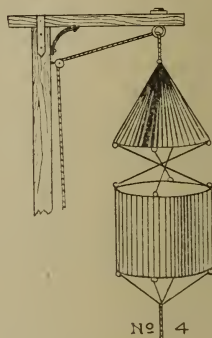
Nº 1



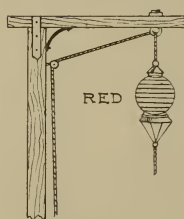
Nº 2



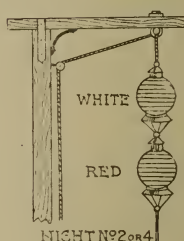
Nº 3



Nº 4



NIGHT Nº 1 or 3



NIGHT Nº 2 or 4

Fig. No. 1.—This signal indicates the probability of a gale, at first from an easterly direction.

Fig. No. 2.—This signal indicates the probability of a gale, at first from a westerly direction.

Fig. No. 3.—This signal indicates the probability of a heavy gale, at first from an easterly direction.

Fig. No. 4.—This signal indicates the probability of a heavy gale, at first from a westerly direction.

The night signal corresponding to Nos. 1 and 3, is a red light.

Night signal corresponding to Nos. 2 and 4 is a white light above a red light.



## THE BAROMETER.

1. Wind is air set in motion. The barometer is almost always affected before the wind actually begins to blow or the rain to fall. The length of time which passes between the first appearance of a change of weather and the actual setting-in is not always the same.

2. When the barometer is steady there is no great likelihood of a storm being near us, while, when it is unsteady, there is danger of the wind freshening to a gale. This unsteadiness may be due to mere local causes, so that it is at times very hard to say whether it shows that a serious storm or only a slight squall is coming on.

3. A sudden rise of the barometer is very nearly as dangerous as a sudden fall, because it shows that the level is unsteady. In an ordinary gale the wind often blows hardest when the barometer is just beginning to rise, directly after having been very low.

4. When the barometer at any place rises very high and continues so for some days, it is because there is too much air at the place, and the wind will be very light. A gale can only set in when the wind flows away, and it will not at first be severe at that place.

5. When the barometer is very low and continues so, there may be calm and even dry weather for a short time, what is called a "pet day" or a "weather-breeder;" but there is great danger of a serious storm, because the air will try to force its way into the districts where the barometer is low and increase the pressure there. The storm will probably be the worst where the barometer has been lowest.

6. The barometer rises for northerly winds (including from northwest, by the north to the eastward), for dry or less wet weather, for less wind, or for more than one of these changes.

7. The barometer falls for southerly winds (including from southeast, by the south to the westward), for wet weather, for stronger wind, or for more than one of these changes.

8. Besides these rules for the barometer, there is one about the way in which the wind changes, which is very important. It is well known to every seaman, and is contained in the following couplet:

"When the wind veers against the sun,  
Trust it not, for back it will run."

9. The wind almost always shifts with the sun, that is, from left to right in front of you. A change in this direction is called veering.

10. If the wind shifts the opposite way, that is, against the sun, the change is called backing, and it seldom occurs unless when the weather is unsettled.



## WIND BAROMETER TABLE FOR THE GREAT LAKES.

Height of Barometer (lake level).	Direction of wind.	Character of weather and wind indicated.
29.40 to 29.60, and steady.....	West .....	Fair, slight change in temperature, gentle to fresh winds.
29.40 to 29.60, rising .....	West .....	Fair, cooler, fresh west to northwest winds.
29.40 to 29.60, falling ... ..	South.....	Warmer, increasing southerly winds.
29.60, or above, falling rapidly	East to south	Warmer, rain or snow within 36 hours, increasing east to southeast winds.
29.60, or above, rising rapidly.	West to north	Cool and clear, quickly followed by warmer, variable winds.
29.60, or above, steady.....	Variable.....	No immediate change, but winds will go to south inside of 36 hours.
29.40, or below, falling slowly.	South to east	Rain or snow, increasing easterly winds.
29.40, or below, falling rapidly	South to east	Rain or snow, high easterly winds, fol- lowed within 48 hours by clearing, cooler, west to northwest winds.
29.40, or below, rising slowly..	South to west	Clearing, colder, fresh to brisk west to northwest winds.
29.20, or below, falling rapidly	South to east	Severe storm of wind and rain, and wind shifting to northwest within 36 hours.
29.20, or below, falling rapidly	East to north	Severe northeaster, with heavy rain or snow, and winds backing to northwest.
29.20, or below, rising rapidly.	Going to west	Clearing and cooler, probably cold wave in winter.

## PROVERBS RELATING TO CLOUDS.

### Storm-Presaging Clouds.

(Extracts from Signal Service Code.)

From Aristotle's time the value of cloud signs in storm and rain prognostications has been recognized, but their interpretation has only recently become possible, since the movement of storm centres over wide areas has been systematically traced. The irregular motions of the high clouds, perhaps more than their forms (presenting the appearance of having been divided and torn up by up-rushing currents), indicate dangerous cyclones. If the equatorial air current in which cyclones are borne along is undisturbed by a cyclonic vortex, the clouds floating in its higher strata would sail on it at a uniform rate. But if we suppose that a storm is moving in the great current the ascending air in the storm's centre is ceaselessly invading the cloud stratum above. It is this up-rushing air which divides the clouds. But as the interchange between the surface and upper air in the cyclone centre tends to retard the swift upper current which transports the cirriform clouds, the motion of these clouds, both over the storm centre and far out in front of it, must often be retarded.

**Anvil Clouds.**—Anvil-shaped clouds are very likely to be followed by a gale of wind.

**Appearances.**—Soft-looking delicate clouds foretell fine weather

with moderate, or light breezes. Hard edged, oily appearing clouds, wind. A dark, gloomy, blue sky indicates wind; a bright, blue sky, clear fine weather. Generally the softer the clouds the less wind. Small inky clouds foretell rain.

**Assemblage of Clouds.**—If an assemblage of small clouds spread out or become thicker and darker, expect rain.

**Against the Wind.**—If you see a cloud rise against the wind, when that cloud comes up to you, the wind will blow the same way that the cloud came, and the same rule holds good of a clear place when all the sky is equally thick except one clear edge.

**Bull's Eye.**—A small, fast growing, black cloud in violent motion, seen in the tropics, is called the Bull's Eye, and precedes the most violent hurricanes.

**Black Scuds**—Small black scuds (clouds), drifting from south-west, is a sign of rain.

**Blue Sky.**—Enough blue sky in the north-west to make a Scotchman a jacket is a sign of approaching clear weather.

**Cross-Wind Clouds.**—If you see clouds going cross wind there is a storm in the air.

**Clouds—Wind.**—Clouds flying against the wind indicate unsettled weather.

**Dark Sky.**—If the sky becomes darker without much rain, and divides into two layers of clouds, expect sudden gusts of wind. Dark clouds in the west at sunrise indicate rain on that day.

#### Evening and Morning.—

Evening red and morning gray  
Will set the traveller on his way;  
But evening gray and morning red  
Will bring down rain upon his head.

#### Fair.—

If the sky beyond the clouds is blue,  
Be glad, there is a picnic for you.

**Fine Weather.**—If the clouds at the same height drive up with the wind and gradually become thinner and descend, expect fine weather.

**Gusts.**—If there be a cloudy sky and dark clouds driving fast under higher clouds, expect violent gusts of wind.

**Heavy Sky.**—If the sky after fine weather becomes heavy with small clouds, expect rain.

**Hues.**—Clouds being soft, undefined, and feathery, will be fair. Generally, any deep unusual hue of clouds indicates rain and wind, while the more quiet and moderate tints indicate fair weather.

**Low Clouds.**—Clouds floating low enough to cast shadows on the ground are usually followed by rain.

#### Mackerel Clouds.—

Mackerel scales and mares' tails  
Make lofty ships carry low sails.

**Red Sky.**—When it is evening ye say it will be fair weather, for the sky is red; and in the morning it will be foul weather to-day, for the sky is red and lowering. (Matthew xvi: 2, 3.)

When the clouds are gathered towards the sun at setting, with a rosy hue, they foretell rain.

If there be red clouds in the west at sunset, it will be fair; if the clouds have a tint of purple it will be fine, or if red bordered with black in the southeast.

**Storm.**—Behold there ariseth a little cloud out of the sea like a man's hand.

Prepare thy chariot and get thee down, that the rain stops thee not.

And it came to pass in the meanwhile that the heavens were black with clouds and wind, and there was great rain. (Kings xviii: 44, 45.)

**Wind.**—If the wind blow between north and east or east, with clouds for some days, and if clouds be then seen driving from the south high up, rain will follow plentifully, sometimes forty-eight hours after; if after the rain the wind goes to the south or south-west, better weather will follow.

**Yellow Sky.**—A light yellow sky at sunset presages wind.

A pale yellow sky at sunset presages rain.

---

## PROVERBS RELATING TO RAIN.

**Clearness.**—Unusual clearness in the atmosphere, objects being seen very distinctly, indicates rain.

### Evening and Morning.—

- Evening red and morning gray,  
Are sure signs of a fine day.
- Evening gray and morning red,  
Put on your hat or you'll wet your head.

**Hours of Commencing** —If rain commences before daylight, it will hold up before 8 a.m.; if it begins about noon, it will continue through the afternoon; if it commences after 9 p.m., it will rain the next day; if it clears off in the night, it will rain the next day; if the wind is from the northwest or southwest, the storm will be short; if from the northeast, it will be a hard one; if from the northwest, a cold one, and from the southwest a warm one.

If rain ceases after 12 m., it will rain next day.

If rain ceases before 12 m., it will be clear next day.

### Morning Rain.—

- If it rain before seven,  
It will clear before eleven;
- If rain begins at early morning light,  
'Twill end ere day at noon is bright.

**Notice.**—

Rain long foretold, long last ;  
Short notice, soon past.

**Wind and Rain.**—Marry the rain to the wind and you have a calm.

**Wind.**—

With the rain before the wind,  
Your topsail halyards you must mind.

---

## PROVERBS RELATING TO THE SUN.

**Aurora.**—Aurora Borealis denotes cold.

**Cloudy Sunset.**—

The sun sets weeping in the lowly west,  
Witnessing storms to come, woe and unrest.

—*Shakespeare.*

**Dark Clouds.**—If the sun sets in dark, heavy clouds, expect rain next day. If at sunrise there are many dark clouds seen in the west, and remain there, rain will fall on that day.

**Double Setting.**—Sun setting double indicates much rain. Red sun indicates fair weather. Orange sun, usually foul weather. Mock suns in winter are usually followed by intense cold.

**Dull Color.**—When the sun appears a pale or dull color expect rain.

**Drawing Water.**—Rays of the sun appearing in a cloud forbode rain. If the sun draws water in the morning, it will rain before night.

**Golden Set.**—

The weary sun hath made a golden set,  
And by the bright track of his fiery car,  
Gives tokens of a goodly day to-morrow.

—*Richard III.*

**Halo.**—A solar halo indicates bad weather. A halo around the sun indicates the approach of a storm, within three days, from the side which is most brilliant. If there be a ring or halo around the sun in bad weather, expect fine weather soon. A bright circle around the sun denotes a storm and cooler weather.

**Haziness.**—A blur or haziness about the sun indicates a storm.

**Pale Twilight.**—Pale, yellow twilight, extending high up, indicates threatening weather.

**Pale Set.**—If the sun sets pale, it will rain to-morrow. A green sunset indicates rain.

**Pale Sunrise.**—If the sun rises pale, a pale red, or even dark blue, there will be rain during the day.

**Red Clouds.**—If the clouds at sunrise be red, there will be rain the following day.

**Red.**—A red evening indicates fine weather; but if the red extends far upwards, especially in the morning, it indicates rain or wind.

**Red Sun.**—A red sun has water in its eye.

**Sea-Green Sky.**—When the sky during rain is tinged with sea-green the rain will increase; if with deep blue, the rain will be showery.

**Yellow Sunset.**—A bright yellow sunset indicates wind; a pale yellow, wet; a neutral gray is a favorable sign in the morning and an unfavorable one in the evening.

The sun reveals the secrets of the sky,  
And who dare give the source of light the lie?

---

## SIGNALS TO ENGINEERS.

For the Great Lakes, St. Lawrence River, and their Tributaries.

One whistle or bell—GO AHEAD.

One whistle or bell—STOP.

Two whistles or bells—BACK.

Three whistles or bells—CHECK.

Four whistles or four bells—STRONG.

Four whistles or four bells—ALL RIGHT.

---

## HOW TO MARK A LEAD LINE.

The weight of a hand-lead is from 7 to 10 lbs. The line is 20 fathoms in length and marked as follows:

2 Fathoms—A piece of leather with two strips.

3 Fathoms—A piece of leather with three strips.

5 Fathoms—A piece of white rag.

7 Fathoms—A piece of red rag.

10 Fathoms—A piece of leather with a hole in it.

13 Fathoms—A piece of blue rag.

15 Fathoms—A piece of white rag.

17 Fathoms—A piece of red rag.

20 Fathoms—Two knots.

---

## NAUTICAL MEASURE.

One nautical mile = 6080.26 ft. = 1.15156 statute miles.

Three nautical miles = one league.

Sixty nautical miles = one degree (69.16 English miles).

360 degrees = circumference of the earth at the equator.

Six feet = one fathom.

5280 feet = one statute mile.

## SHIPPING MEASURE.

Shipping ton for the measure of cargo.

$$\begin{aligned} 40 \text{ cubic feet} &= \begin{cases} 1 \text{ U.S. shipping ton.} \\ 31.16 \text{ imperial bushels.} \\ 32.143 \text{ U.S. bushels.} \end{cases} \\ 42 \text{ cubic feet} &= \begin{cases} 1 \text{ British shipping ton.} \\ 32.719 \text{ imperial bushels.} \\ 33.75 \text{ U.S. bushels.} \end{cases} \end{aligned}$$

---

## REVIVING THE RESCUED.

### Rules for Reviving Persons Rescued from the Water.

1. Loosen the clothing; place the face downward, with the forehead resting on one of the wrists, and the face turned to one side. Open the mouth; seize the tongue between the fingers, covered with a piece of cloth, and draw it forward between the teeth; clear the mouth and throat from mucus by passing the forefinger, covered with a handkerchief or piece of cloth, far back into the mouth, thus opening a free passage to the windpipe.

2. Turn the body face upward, shoulders resting on a folded coat or pillow; keep the tongue drawn forward; raise the arms backward and upward to the sides of the head (THIS EXPANDS THE CHEST AND ALLOWS THE AIR TO ENTER THE LUNGS), then slowly move them downward, bending them so that the elbows will come to the sides and the hands cross on the pit of the stomach, and press them gently but strongly against the sides and chest (THIS FORCES THE AIR OUT OF THE LUNGS). Continue these two movements (WHICH PRODUCE ARTIFICIAL BREATHING), very deliberately about ten or twelve times in a minute, and without ceasing, until the patient breathes naturally, or until satisfied that life is extinct.

3. While this is being done a little friction on the chest may be produced by rubbing gently with a warm flannel, and the body may be stripped and wrapped in dry blankets.

After NATURAL BREATHING begins, continue very gently, for a few minutes, the two movements which produced artificial breathing.

After natural breathing is FULLY restored, give the patient a teaspoonful of brandy, hot sling or tea, two or three times a minute, until the beating of the pulse can be felt at the wrist.

Rub the arms and legs upward, and the feet and hands with a warm or dry flannel.

Apply hot cloths to the body, legs and arms, and bottles of hot water to the feet.

### Caution.

1. Do not be discouraged if animation does not return in a few minutes. THE PATIENT SOMETIMES RECOVERS AFTER HOURS OF LABOR.

2. Do not allow the tongue to fall back and close the windpipe while the arms are being worked.

3. Do not rub the legs and arms until natural breathing is restored.

4. Do not put any liquid in the mouth until natural breathing is FULLY restored.

5. Do not roll the body or handle it roughly.

6. Do not allow the head to hang down.

## INFORMATION REGARDING ROPE AND CABLE.

Breaking Load in Tons of 2240 lbs.	Kind of Cable.	Girth of Wire Rope. Girth of Hemp Rope.	Weight 1 Foot in Length Pounds.
1 Ton	Wire Rope . . . . .	1.0 inch	.125
	Hemp Rope . . . . .	2.0 inches	.177
8 Tons	Wire Rope . . . . .	2.0 inches	.438
	Hemp Rope . . . . .	5.0 inches	.978
12 Tons	Wire Rope . . . . .	2.5 inches	.753
	Hemp Rope . . . . .	7.0 inches	2.036
16 Tons	Wire Rope . . . . .	3.0 inches	1.136
	Hemp Rope . . . . .	8.0 inches	2.365
20 Tons	Wire Rope . . . . .	3.5 inches	1.546
	Hemp Rope . . . . .	9.0 inches	3.225
24 Tons	Wire Rope . . . . .	4.0 inches	2.043
	Hemp Rope . . . . .	10.0 inches	4.166
30 Tons	Wire Rope . . . . .	4.5 inches	2.725
	Hemp Rope . . . . .	11.0 inches	5.000
36 Tons	Wire Rope . . . . .	5.0 inches	3.723
	Hemp Rope . . . . .	12.5 inches	5.940
44 Tons	Wire Rope . . . . .	5.5 inches	4.500
	Hemp Rope . . . . .	14.0 inches	6.940
54 Tons	Wire Rope . . . . .	6.0 inches	5.670
	Hemp Rope . . . . .	15.0 inches	7.920



# COMPUTATION FOR SPEED.

If the course is S ft. long and the time, T seconds, we may arrive at the value for speed by substituting for these in the following equation :

$$\frac{S}{T} \times .6818 = \text{miles per hour, or}$$

$$\frac{S}{T} \times .5921 = \text{knots or nautical miles per hour.}$$

The table below gives the speed of a boat in miles per hour opposite the time required in traveling a measured mile; or in knots per hour, if the course covered is a measured nautical mile.

TIME.		AVERAGE SPEED PER HOUR.	TIME.		AVERAGE SPEED PER HOUR.
Min.	Sec.		Min.	Sec.	
4—	0	15.00	8—	15	7.27
4—	15	14.12	8—	30	7.06
4—	30	13.33	8—	45	6.86
4—	45	12.63	9—	0	6.61
5—	0	12.00	9—	15	6.49
5—	15	11.43	9—	30	6.31
5—	30	10.91	9—	45	6.15
5—	45	10.43	10—	0	6.00
6—	0	10.00	10—	15	5.85
6—	15	9.60	10—	30	5.71
6—	30	9.23	10—	45	5.58
6—	45	8.89	11—	0	5.45
7—	0	8.57	11—	15	5.33
7—	15	8.28	11—	30	5.12
7—	30	8.00	11—	45	5.10
7—	45	7.74	12—	00	5.00
8—	0	7.50			

# BELL TIME ON SHIPBOARD.

Number Bells.	Time A.M.	Time P.M.
1 .....	12.30 .....	12.30
2 .....	1.00 .....	1.00
3 .....	1.30 .....	1.30
4 .....	2.00 .....	2.00
5 .....	2.30 .....	2.30
6 .....	3.00 .....	3.00
7 .....	3.30 .....	3.30
8 .....	4.00 .....	4.00
1 .....	4.30 .....	4.30
2 .....	5.00 .....	5.00
3 .....	5.30 .....	5.30
4 .....	6.00 .....	6.00
5 .....	6.30 .....	6.30
6 .....	7.00 .....	7.00
7 .....	7.30 .....	7.30
8 .....	8.00 .....	8.00
1 .....	8.30 .....	8.30
2 .....	9.00 .....	9.00
3 .....	9.30 .....	9.30
4 .....	10.00 .....	10.00
5 .....	10.30 .....	10.30
6 .....	11.00 .....	11.00
7 .....	11.30 .....	11.30
8 .....	Noon .....	Midnight

## RULES REGARDING SHIPS' LIGHTS.

Lights must be carried on all vessels from sunset to sunrise.

WHITE LIGHT must be placed forward visible over ten points of the compass on each side.

RED LIGHT placed on left or port side, visible from right ahead to two points abaft the beam.

GREEN LIGHT placed on right or starboard side, visible from right ahead to two points abaft the beam.

COMBINATION LIGHTS, including the above, may be carried on open launches and sailing craft.

A WHITE LIGHT shall be on board a row boat to be used in time to prevent collision.

Upon being overtaken by another vessel, a white light must be shown astern, visible over 12 points of the compass aft.

Rules regarding side lights are to be complied with when vessel is under way and not otherwise.

A WHITE LIGHT is to be shown, while at anchor, which is visible all around the horizon.

A whistle, siren, fog horn or something of similar nature is to be used as a fog signal. A "prolonged blast" is from four to six seconds duration.

One prolonged blast at one minute intervals or less must be given when the boat has way upon her.

In sailing vessels one blast at one minute intervals or less must be given when on starboard tack ; two blasts at one minute intervals when on port tack ; with wind abaft the beam, three blasts at similar intervals.







Royal Canadian Yacht Club  
Year book.  
v.1906

P  
Pol.Sci.  
R

**University of Toronto  
Library**

**DO NOT  
REMOVE  
THE  
CARD  
FROM  
THIS  
POCKET**

Acme Library Card Pocket  
LOWE-MARTIN CO. LIMITED







